The Cotton Gin and Oil Mill

PRESS

MARCH 19, 1960

61st year

THE MAGAZINE OF THE COTTON GINNING AND OILSEED PROCESSING INDUSTRIES

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Featuring
Texas Ginners' Convention Plans
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Western Production Conference Report

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The original Super Champ was introduced in 1955. After it had so outstandingly lived up to its name, additions were made to the Super Champ line and today there is a family of Super Champs . . . three different units designed for different ginning or growing conditions. However, each of the three Super Champs combines the three revolutionary principles that have made Super Champs the yardstick of the industry.

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5 SAW

9 SAW

Which champ for you?

7 SAW

The 7-saw Super Champ

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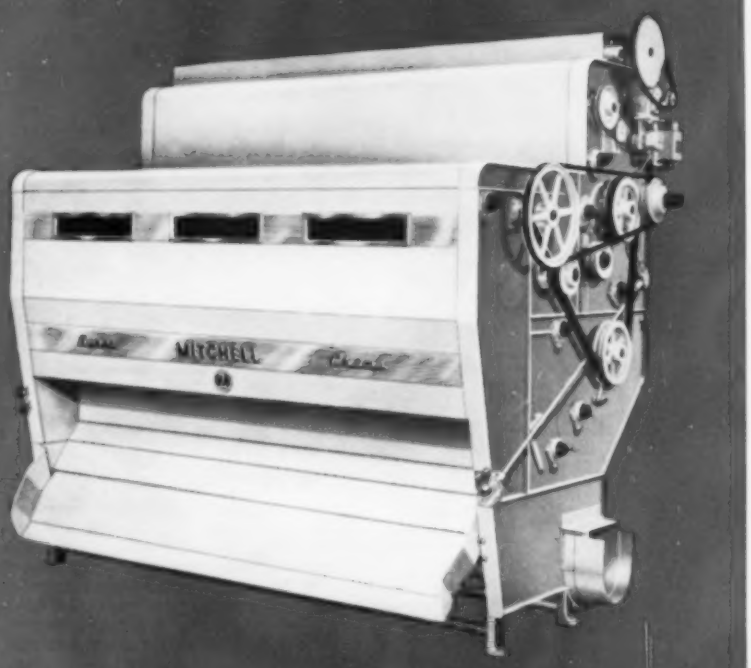

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MANUFACTURERS OF FINE MACHINERY FOR MORE THAN HALF A CENTURY

VOL. 61 MARCH 19, 1960 NO. 6

THE COTTON GIN AND OIL MILL PRESS

THE COTTON GIN AND OIL MILL PRESS...

READ BY COTTON GINNERS, COTTONSEED CRUSHERS AND OTHER OILSEED PROCESSORS FROM CALIFORNIA TO THE CAROLINAS

* * *

OFFICIAL MAGAZINE OF:

NATIONAL COTTONSEED PRODUCTS ASSOCIATION
NATIONAL COTTON GINNERS' ASSOCIATION
ALABAMA COTTON GINNERS' ASSOCIATION
ARIZONA GINNERS' ASSOCIATION
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WALTER B. MOORE
Vice-President and Editor

HELEN TROY
Editorial Assistant

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WASHINGTON REPRESENTATIVE

(EDITORIAL ONLY)

FRED BAILEY
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OUR COVER PICTURE:

This issue features plans for the annual convention of Texas Cotton Ginners' Association, and the Summary-Proceedings of the Western Cotton Production Conference in California. No editor would dare offend either of these proud, proud states by publishing a cover picture from one state, instead of from the other. So, taking the coward's way out, we show loads of seed cotton at a gin in a neutral state—New Mexico.

Photo by John White

When a company builds a precision piece of equipment, whether it be a fine watch or an Expeller, they put money, energy, time, years of experience and the best materials into every part. When these parts need replacement, they should never be replaced with inferior parts—if you value your machine and its products.

Protect your investment by insisting on genuine Expeller parts. The same careful craftsmanship goes into the manufacture of replacement Anderson barrel bars, shafts and other parts as in original parts for the building of our new machines. Give your machines a new lease on life.

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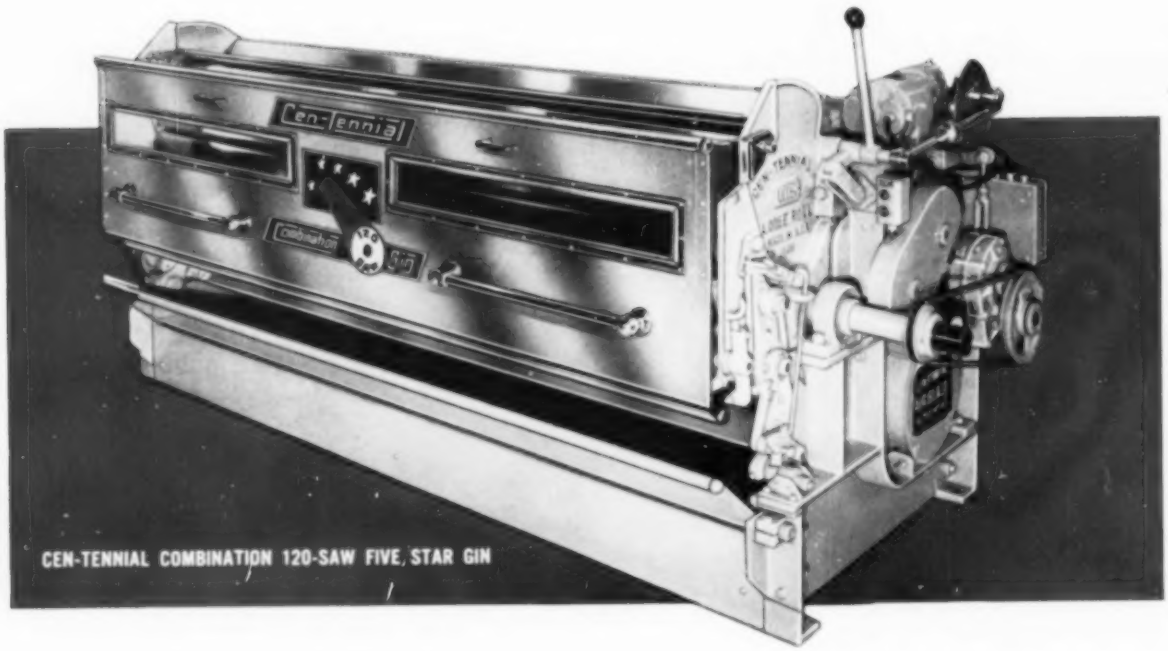

CEN-TENNIAL COMBINATION 120-SAW FIVE STAR GIN

designed to meet a vital need of the fast moving cotton industry . . . GREATER CAPACITY and HIGHER QUALITY.

All of the Outstanding Features for which CEN-TENNIAL GINS are famous . . . plus new improvements and refinements, make this gin the WORLD'S FINEST.

FIVE STAR VALUE

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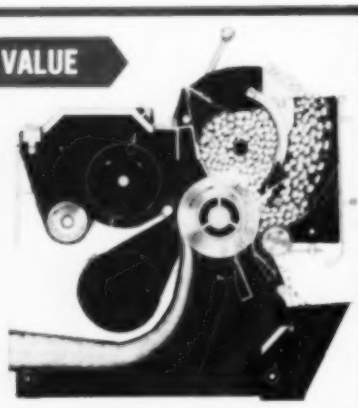

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Me 'n the Maid

FOLLOW the Maid of Cotton for a day —see why this is such an important promotion for the cotton industry— just see what it is that she does besides stand around and look beautiful. What an assignment, a mere snap, be an observer, make a few notes, type up your story and in between times, you'll get to see a nice fashion show, boy this may be the best assignment to come across our desk in a long while! Hot dog, visions of sugar plums and new spring fashions danced in our head.

So from the comparative calm of this office, telephones ringing, notwithstanding, we thought up some questions, and confidently marched off to meet the plane arriving at Dallas' Love Field, no problems, no worries, just go out and see what she looks like, and tomorrow, you can see what a Maid of Cotton does all day.

We're Off

Now this was our first mistake. Bright-eyed and bushy-tailed (or comparatively so, for this reporter) we arrived at the hotel on the appointed day. The gals (the Maid, Sandra Lee Jennings, her tour manager, Libby Clark, and tour secretary, Mary Ann French) were just finishing breakfast.

This was the only time we sat down all day. It was run, run, run—and then run and wait! Off to the studio for a television interview with the woman's editor; then across the street to the radio station, and while we're waiting for the live interview with the local d.j., an interview with the fashion editor of the paper; met several interesting people in the lobby of the radio station, the national yoyo champion, Randy Blackwell of Beaumont, Texas, (yes, a yoyo isn't a yoyo without its cotton string to bounce up and down on) who was interviewed just before the Maid of Cotton; immediately following the Maid's interview, she met the new starlet, Donna Anderson, whose picture "On The Beach" was soon to open in Dallas.

This left all of one-half hour to be fitted at Titche-Goettinger department store, which sponsored the Maid's appearance in Dallas, for some of their "out-of-stock" cottons which the Maid would be modeling that afternoon.

Then off to the style show at the Dallas Athletic Club Country Club (didn't someone forget to mention lunch for all of us?) The hubbub of the fitting room, the backstage confusion, the last-minute spearing of the right hat, and out on the runway, covered with flood-lights, looking like she had taken, at a mere minimum, six hours to get ready, flashed the Maid of Cotton.

New Fashions

How could anyone look so lovely, emerging from all that confusion? (By this time, we had retreated to a corner to keep from getting run over). All the store models, supporting the Maid in this all-cotton presentation of the latest in high fashion had arrived, and this is as near as we may ever come to a stampede. From our corner, we could hear all the ohs and ahs of approval as Sandra would sweep by in her lovely cotton fashions. Wow! Imagine trying to please 500 women all at one time . . . but here was "our gal" right up there with the best of the professional models, and doing the best job of the whole lot!

Back to town (about a 10-mile drive) for an appointment with the hair dresser; yes the radio station can send their "on-the-spot" reporter to talk to Sandra while her hair is being set. One of the Ford agencies in Dallas furnished them transportation and bless your heart. Memphis dealers will give The Maid a Ford of her choice, so Ford is her "official" car.

So there was a few minutes for some sightseeing, squeezed in enroute to invite Big D's Mayor to the Memphis Cotton Carnival, one of her official duties.

Back to the department store, for the McCall's fashion show and more beautiful cottons. (Won't somebody please mention lunch???) There are June and Jane Wyche, the twin daughters of Mr. and Mrs. Paul Wyche of Dallas in the teen-age department — would Sandra mind coming into that department to help them make their selection—in duplicate, that is. The rest of us got to sit down, someone finally remembered about eating (for a while there we thought it had gone out of style) . . . . but the Maid stopped only long enough to drink some orange juice and eat a potato chip.

SANDRA arrives in Dallas.

Still Going Strong

At the Dallas Cotton Exchange . . . . met some of the officials, and said a few words to the members. Was there something we have forgotten, oh yes, another

(Continued on Page 36)

Text by
HELEN TROY,
The Cotton Gin and
Oil Mill Press

Photos by
GEORGE WELLS

WE'RE off on "A Day in the Life of the Maid of Cotton"—Me 'n the Maid.

WITH radio d.j. Jack Harrison and oh so at ease during the interview.

In Dallas, April 3-5

Texas Ginners' Convention Plans Complete

Plans are complete for the entertainment and business program for the annual convention of Texas Cotton Ginners' Association, which will bring some 5,000 persons to the State Fairgrounds in Dallas, April 3-5.

Extensive exhibits by gin machinery manufacturers and other suppliers will be one of the major features of the convention, under the sponsorship of the Gin Machinery and Supply Association, the non-profit group which provides free entertainment at this Texas meeting.

Exhibits will be in the Varied Industries Building, and convention sessions in the Agricultural Building.

Robert L. Horton, Waxahachie, is president of Texas Cotton Ginners' Association. James Walsh, Mission, is vice-president; and Edward H. Bush, Dallas, executive vice-president. R. L. Massey, Pilot Point, is chairman of the executive committee.

• **Starts on Sunday** — Exhibits will be open and registration will start on Sunday afternoon, April 3. An executive committee meeting is scheduled Sunday morning at the Sheraton-Dallas Hotel.

National Cotton Ginners' Association will hold a meeting that afternoon in Parlor G, Adolphus Hotel. Jerome Jalufka, Robstown, Texas, is president of the National Association and will preside. (See separate story.)

Selection of the National Ginner of the Year and presentation of the Horace Hayden Memorial Trophy will be a highlight of the meeting in Dallas.

Directors of Texas Association will have their annual banquet Sunday evening in the Royal Room of the Dallas Athletic Club.

• **Monday Session** — Texas Association directors will meet at 8:30 Monday morning at the Adolphus Hotel, Parlor D.

Ladies will be entertained with bingo at 10 a.m. in the Agricultural Building.

Monday afternoon's business session will feature an address by Congressman Hale Boggs of Louisiana, and a panel discussion. Panel participants will be Wilmer Smith, cotton grower; Dr. Earl Berkley, research laboratory head; T. D. Truluck, mill cotton buyer; and Robert A. Montgomery, ginning laboratory technologist.

• **Tuesday Session** — Ed Lipscomb, National Cotton Council public relations director, will be the guest speaker at the Tuesday morning session.

The annual report of the president, and the presentation of awards to Bobby Owen Kelly, 4-H Club boy; and Texas Ginner of the Year Aubrey L. Lockett are on the program for this session.

On Tuesday afternoon, the convention will hear a talk by Waggoner Carr, Lubbock, speaker of the Texas House of Representatives.

A style show of cotton apparel will be presented by Volk Brothers Co. of Dallas.

• **Entertainment** — Two major entertainment features, in addition to bingo for the ladies, special attendance awards and entertainment at the opening of each business session, have been planned by the hosts this year.

All convention registrants will be guests on Tuesday morning for breakfast served from 7:30 to 9:30 in the convention hall.

The annual dance will be at the Sheraton-Dallas Hotel, Tuesday evening, with admission by registration badge.

Monday evening will be a free night for ginners and their families to choose their own entertainment.

Officers of the host organization, the Gin Machinery Association, are Edward H. Bush, president; Donald Mitchell, vice-president; Ray Senter, treasurer; and A. G. Falk, secretary.

Members of the executive committee include U. H. Ohrman, Carsey Manning and Walter B. Moore.

CONGRESSMAN HALE BOGGS (above) of Louisiana will be a featured guest speaker on the convention program on Monday afternoon, April 4. ED LIPSCOMB (right), sales promotion and public relations director for the National Cotton Council, will discuss the importance of improving agriculture's public relations. He will speak on Tuesday.

ROBERT L. HORTON (left), president, Waxahachie; JAMES M. WALSH (below), vice-president, Mission; and R. L. MASSEY (right), chairman of the executive committee, Pilot Point, are officers who have led Texas Ginners' Association during the past year.

PERFORMANCE ACHIEVEMENT IN COMPLETE BATTERIES

A total of thirty-one batteries consisting of one hundred and eleven 120-saw Murray Safety gin stands were in operation during the 1959 ginning season. These thirty-one plants have processed approximately

220,000 BALES

Ginning rates were three bales per stand per hour in many installations.

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Clark Gin Co.	Houlka, Miss.	2-120	
Clovis-Sanger Co-op Gin.	Sanger, Calif.	4-120	
Davis Gin Co.	Edinburg, Texas	4-120	
D. J. Thomas Co. Gin.	Lake Cormorant, Miss.	4-120	
Dos Palos Co-op Gin.	Dos Palos, Calif.	4-120	
Farmers Gin Co.	Chickasha, Okla.	2-120	
Farmers Co-op Assn.	Erick, Okla.	3-120	
Farmers Co-op Gin.	Floydada, Texas	4-120	
Farmers Union Co-op Gin.	Mountain View, Okla.	3-120	
Farmers Union Co-op Gin.	Wayne, Okla.	2-120	
Farmers Union Co-op Gin.	Willow, Okla.	3-120	
Five Points Ginning Co.	Five Points, Calif.	5-120	
Growers Westmorland Gin.	Westmorland, Calif.	4-120	
Island Co-op Gin.	Lemoore, Calif.	5-120	
Sr. Don Jose Ramon Moro Figurroa	Jerez de la Frontera, Spain	3-120	
Krenek Gin	Rosenberg, Texas	3-120	
Laton Co-op Gin.	Laton, Calif.	4-120	
London Co-op Gin.	Corpus Christi, Texas	2-120	
Marana Gin Co.	Eloy, Arizona	4-120	
Mid Valley Ginning Co.	Brawley, Calif.	4-120	
New Home Co-op Gin.	New Home, Texas	4-120	
Pettus Gin Co.	Lonoke, Ark.	3-120	
Red Springs Co-op Assn.	Red Springs, Texas	3-120	
Salyer Land Company Gin.	Corcoran, Calif.	5-120	
Shafter-Wasco Ginning Co.	Shafter, Calif.	4-120	
Slaton Co-op Gin No. 1.	Slaton, Texas	3-120	
Stratford Co-op Gin.	Stratford, Calif.	5-120	
Travis & Moorhead Gin.	Meadow, Texas	3-120	
Tule River Co-op Gin.	Woodville, Calif.	5-120	
Visalia Co-op Gin.	Visalia, Calif.	5-120	

THE MURRAY COMPANY OF TEXAS, INC.

PICTURED HERE are officers of the ginners' organizations which met in conjunction with the Midsouth Gin Supply Exhibit. On the left are Arkansas-Missouri Association officers, left to right: Lon Mann, president; W. F. Sikes, first vice-president; Jack Dante, second vice-president; R. D. Hughes, secretary; and W. Kemper Bruton, executive vice-president and treasurer. Tennessee officers, with their wives, in the picture on the right are: Waring Hazlehurst, president, and Mrs. Hazlehurst; Harold Williams, secretary, and Mrs. Williams; and Pat Mann, vice-president, and Mrs. Mann.

In Memphis, March 7-9

Large Attendance at Midsouth Exhibit

■ **LON MANN heads Arkansas-Missouri Ginners' Association; officers re-elected by Tennessee.**

Attendance at the Midsouth Gin Supply Exhibit in Memphis, March 7-9, was highly pleasing to the sponsors and exhibitors who displayed their machinery and supplies to large crowds at the Midsouth Fairgrounds.

• **Officers Elected** — Arkansas-Missouri Cotton Ginners' Association and Tennessee Ginners' Association held their annual business meetings and dinner dances in conjunction with the Midsouth Exhibit.

Lon Mann, Marianna, Ark., was elected president of the Arkansas-Missouri Association. W. F. Sikes, Sikeston, Mo., is first vice-president; Jack Dante, Dumas, Ark., second vice-president; R. D. Hughes, Blytheville, Ark., secretary; and W. Kemper Bruton, Blytheville, executive vice-president and treasurer.

Tennessee Ginners' Association re-elected its officers. They are Waring Hazlehurst, Bemis, president; Pat Mann, Brownsville, vice-president; and Harold (Pete) Williams, Jackson, secretary.

• **Monday Session** — Timely discussions of current problems associated with cotton and ginning featured the business program.

Monday's speakers included:

Early C. Ewing, Delta and Pine Land Co., Scott, Miss., on "Breeding an Ideal Cotton for Mechanical Harvesting."

Cameron Dean, Tribett, Miss., described his experience, as a farmer, with mechanical harvesting.

"Ginning Mechanically Harvested Cotton" was discussed by Robert Matthews, Bucoda Gin Co., Sikeston, Mo.

Ben F. Franklin, USDA Cotton Division, talked about cotton gin tags and classification.

• **Tuesday Program** — Dave Chandler, Arkansas Extension specialist, was the initial speaker on Tuesday morning. Practices to preserve quality were his topic.

Quality preservation also was discussed by Clyde Griffin, U.S. Ginning Laboratory, Stoneville, Miss.; and Vernon Moore, National Cotton Council, Memphis.

"Public Relations for Agriculture" was the subject of an address by Director C. B. Ratchford of Missouri Extension Service.

• **Entertainment** — Monday's entertainment included a ladies' reception, social hour and the banquets of the two sponsoring associations, all held at the Peabody Hotel.

On Tuesday, there was a luncheon for the ladies and a dinner and floor show at the Peabody.

Fiber Research Scientists Hold Spring Meeting

More than 175 fiber research scientists attended the spring meeting of The Fiber Society at New Orleans' Roosevelt Hotel March 10-11.

The program arranged by C. H. Plummer, Chicopee Manufacturing Corp., Milltown, N.J., included eight presentations on current research developments in fibers, ranging from discussion of cotton breeding to measuring comfort in textiles.

USDA's Southern Regional Research Laboratory was toured.

San Joaquin River Flow 55 Percent of Normal

Volume of flow in rivers of the San Joaquin Valley will be only 55 percent of normal this spring and summer, California Department of Water Resources predicts.

The forecast is based upon precipitation to March 1, and the assumption of normal rainfall during the remainder of the season.

Rainfall throughout California to March 1 was only 80 percent of normal.

Werner von Bergen Lauded For Textile Leadership

Werner von Bergen, associate director of research, J. P. Stevens Co., has received the Harold DeWitt Smith Award for outstanding service to the textile industry.

His contributions to research and his writings, including the American Wool Handbook and more than 50 publications, were cited during the presentation. This was made March 3 at the spring meeting of the Committee on Textile Materials of the American Society for Testing Materials. The meeting was at the Sheraton Atlantic Hotel in New York City.

Scott Issues Information

Timely information on cottonseed treatment and proper fertilizer application has been distributed to cotton growers by Joe H. Scott, Missouri Extension cotton production specialist.

Labor Service Stopped

Arizona Cotton Growers' Association has terminated the Mexican National labor recruiting service started in 1949. Reduced use of hand labor has curtailed the need for the service. The Association re-elected officers at its recent annual meeting.

Walter Cardwell Dies

Walter W. Cardwell, 67, Luling, Texas, agricultural leader, died recently. He headed the Luling Foundation, an agricultural research center.

Law Aids Industry

More Acreage Released

MORE COTTON ACRES are being released this season by cotton growers who do not want to plant their allotments, and are being reapportioned among farmers who want to grow more cotton.

Final figures are not yet available, but reports from many states indicate that legislation passed by the last session of Congress has made more acres of cotton allotments move from the hands of farmers who don't want them into the hands of those who do.

As reported in The Press on Aug. 22, 1959, and in earlier issues, this legislation was passed as a result of the efforts of cotton industry leaders in North Carolina, Texas, Mississippi, Alabama and most of the other states of the Southeast, Midsouth, and Southwest. The law enables a grower to protect his allotment by planting 75 percent of his acreage, or by releasing unplanted acres for reapportionment.

This spring, the legislation has proved especially helpful to areas where many farmers are not planting their full allotments but other farmers need more acres for cotton.

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FIRST IN RESEARCH . . . FIRST IN QUALITY

Checking moisture content of cotton.

Checking stresses on Standard Density Press.

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BIRMINGHAM, ALABAMA

ATLANTA DALLAS HARLINGEN PRATTVILLE LUBBOCK TULARE MEMPHIS PHOENIX

Farm Labor Outlook

MECHANIZATION of cotton and other crops has made rapid progress, but much hand labor still is needed.

Basically, this requirement is met by the farm operator and year-around hired labor, but during cultivation, and especially harvest time, it demands the temporary addition of millions of hired and family workers.

Although the labor requirements of agriculture have been greatly reduced, the available labor force at the time and place when needed has shown an even-greater decline. Cultivation and harvesting of crops is still seasonal, and long hours are necessary at such times to take advantage of the weather and other factors over which the farmer has no control. This, together with better terms of employment, hours and wages offered by industry and commerce, has resulted in a mass exodus of agricultural labor to urban and industrial areas. The variety and number of year-around jobs now available in urban areas has also greatly reduced the number of agricultural workers available for seasonal work.

HEARINGS START MARCH 22

Hearings start in Washington March 22 on bills to extend National farm labor legislation, discussed in this article. A House Agriculture Subcommittee is holding hearings.

A few years ago for example, some 10,000 to 12,000 experienced workers per day were obtained from Memphis during the cotton picking season. Now the peak is about 4,000, many of whom are physically unable to do a good day's work. This places farmers in the position of having to look to other areas and even foreign workers to harvest their crops.

As the newer generation seeks greener pastures, there are still many men and women who have a love for the soil and are willing to do the hand work or "stoop labor" so necessary for many crops. Much has been said regarding the hardships and living conditions of migratory workers who go from crop to crop, but the fact remains they are free agents and are doing the type of work they know and are best fitted for. They are free to bargain, and many come back to the same employer, year after year, usually because of working conditions and better wages.

Much has been done by employers and the state and national employment services to better the housing, transportation, wages and working conditions of migrant workers during the past few years. More will be done as fast as economically feasible.

It must be remembered, however, that the farmer is still the low man on the economic totem pole. In spite of all that is being done to secure sufficient domestic workers to cultivate and harvest essential and vital crops, at the time and place when needed, it has been necessary in some crops and areas to use Mexican National agricultural workers.

Much Misinformation

Considerable misleading and inaccurate information has been publicized regarding both the migratory and Mexican National farm labor programs. Under Public Law 78, "No Mexican National workers can be made available to an employer unless (1) sufficient domestic workers who are able, willing, and qualified are not available at the time and place needed to perform the work for which such workers are to be employed, (2) the employment of such workers will not adversely affect the wages and working conditions of domestic agricultural workers similarly employed, and (3) reasonable efforts have been made to attract domestic workers for such employment at **wages and standard hours of work** comparable to those offered to foreign workers."

The Secretary of Labor, working through the U.S. Employment Service, was given authority to enforce the intent of the law and also to issue rules and regulations deemed necessary as to transportation, housing, etc. The cost of recruiting, transportation, etc., is paid by the employer.

Recently a committee of four consultants appointed by the Secretary of Labor issued a report to the effect that wages for domestic workers in areas using Mexicans were lower and had not kept pace with those not using such workers.

This certainly is not true with respect to Arkansas. This state has been using some Nationals for chopping and a good many for harvesting cotton ever since the program was inaugurated. Statistics put out by the USDA and the Arkansas College of Agriculture show that farm hourly wages have increased slightly every year since 1948, and the wage paid for picking cotton has been equal to or above most of the states which do not use any Mexican National workers.

It is apparent to those of us who have been connected with the farm labor program for a number of years that some individuals and organizations who are concerned solely from a sociological or "do-gooder" standpoint are determined to force wage increases and fringe benefits on agricultural producers regardless of whether they are justified or economically feasible under existing marketing conditions. The farmer's share of the food dollar has declined from 51 percent in 1947 to 37 percent in November 1959, and a further decline is predicted for 1960.

(Continued on Page 60)

HARVEY ADAMS, the author of this article, is executive vice-president of the Agricultural Council of Arkansas. He has been a member of the National Farm Labor Advisory Committee for a number of years, and a member of the Mexican subcommittee. Adams also is secretary-treasurer of American Cotton Producer Associates, and a member of the steering committee of the National Conference of Commodity Organizations. After serving with the Navy, he was with Ford Motor Co., but has been with the Council 19 years.

V. C. JOHNSON

M. E. DECHERD

New Officers of Texas Co-op Ginners

TWO NEW OFFICERS elected by Texas Cooperative Ginners' Association at the recent annual meeting in Austin are shown here. V. C. Johnson of Hutto is president, after serving last year as vice-president. M. E. Decherd of Taft, formerly secretary, is vice-president. Bruno Schroeder of Austin continues as executive secretary-treasurer for the ginners' group and for Texas Federation of Cooperatives.

SPURGE MORRISON as a football player, when they dared him to ask Elly for a date.

Spurge and Elly

SPURGE AND ELLY about the time that they were married, and shortly before he joined Chickasha Cotton Oil Co.

He asked her for a date on a dare, but marrying her was his own idea.

A SMART ALECK caused Spurge to ask Elly for their first date. But marrying the girl was Spurge's own idea.

Spurge, as practically everyone in the oil milling and ginning business knows, is J. S. Morrison, Fort Worth, vice-president in charge of gins and oil mills for Chickasha Cotton Oil Co.

And Elly is Mrs. J. S. Morrison, the high school sweetheart whom he married a few years after he got a date with her on a dare. Here's how it happened:

Spurge was a football player, but girl shy, while attending high school at Cameron College, Lawton, Okla. Another football player was going with Elly. When the time came for the annual Hi-Y banquet, this other player made a motion that every one must have a date or not attend the banquet. Spurge and a friend argued violently against having to take girls, but were outvoted.

Taking the two shy players aside, the coach told them, "You boys are crazy if you don't hurry over and make dates with the two girls that these other fellows have been dating."

Spurge mustered up the courage to ask Elly Hilbert for a date and, as he says, "I ended up marrying Elly."

• **Born in West Virginia** — James Spurgeon Morrison was born in West Virginia, at the little hamlet of Hire, on May 31, 1903. Three years later, his family took him to Oklahoma.

It was four years after Spurge finished high school at Cameron College, a prep school, and two years after Elly's graduation, that they were married. Spurge was working for a wholesale grocery company, as he did from 1925 until 1932, when the depression sent him job hunting, as it did so many others.

The Chickasha Gin in Lawton hired him as a bookkeeper, and Spurge has been with Chickasha throughout the 28 years since. He has risen steadily in the organization—going to the district gin office, then to the Lawton mill as cashier —to Tulsa in 1940 as assistant manager —to Duncan in 1942 as mill manager (crushing peanuts) and district gin manager—back to Lawton in 1943 to manage that mill and be district gin manager.

J. S. MORRISON, Chickasha vice-president in his office.

MR. AND MRS. J. S. MORRISON, today, in front of their Fort Worth home.

In 1948, Morrison was made manager of Chickasha's Chic-o-Line feed department at Chickasha. In 1953, he became vice-president and general manager of gins, and since 1957 he has held the position of vice-president in charge of gins and oil mills.

• **Honored by Industry** — The gin and oil mill executive is a strong believer in and supporter of industry organizations, and his associates have called upon him for service many times.

He was president of Oklahoma Cottonseed Crushers' Association in 1953 and president of Oklahoma Feed Manufacturers' Association the same year—which surely must be the only time that one person held both positions simultaneously.

Oklahoma Research Foundation, an industry group which has contributed much to cotton progress, chose Morrison as its head in 1957.

Oklahoma Cotton Ginners' Association elected him president in 1958, after he had served on committees and as a director for many years.

Spurge also has been a delegate for eight years to the National Cotton Council. At the present time he is an advisory director, Texas Cotton Ginners'

(Continued on Page 61)

In Biloxi, April 4-5

Mississippi Valley Oilseed Meeting

■ **BUENA VISTA Hotel in Biloxi to be convention headquarters; Fleming, Harper to be among featured speakers.**

Mississippi Valley Oilseed Processors' Association, Inc., will hold its first convention of the combined groups, April 4-5, at the Buena Vista Hotel in Biloxi, Miss.

President Zach McClendon will open the convention Monday, April 4 at 9 a.m. when committees will be appointed. J. D. Fleming, executive vice-president, National Cottonseed Products Association, Memphis, will be the first speaker and will discuss, "The Legislative Outlook." A. M. Ribe, traffic consultant, Birmingham, Ala., will then present a traffic report, followed by a talk "The Eleventh Hour," given by Chester Lauck, Continental Oil Co., Houston.

The annual golf tournament will be held during the afternoon at the Great Southern Golf Club.

• **Second Day** — James E. McHale, manager, Fats and Oil Department, Merrill Lynch, Pierce, Fenner and Smith, will be the first speaker on the second day, and his topic will be, "Government Programs and the Seed Crusher."

Garlon A. Harper, Research and Education Director, National Cottonseed Products Association, Dallas, will speak on "Realistic Programs Solve Problems."

Committee reports will then be heard, followed by the election and installation of officers and the awarding of golf trophies.

The board of directors will meet at 11:30 a.m. immediately following the adjournment of the convention.

That evening the annual banquet and dance will be held in the Hurricane Room with A. J. Vaughan as toastmaster.

The ladies attending the convention will be entertained at a bingo party Monday afternoon in the East Lounge.

Officers who have served during the past year in addition to McClendon are Vaughan, vice-president; M. O. Carter, treasurer, and C. E. Garner, secretary.

ZACH McCLENDON

A. J. VAUGHAN

■ **A. J. RICHTER has been elected president of Modern Farmers' Co-op Gin at El Campo, Texas. FRANK ARNOLD, JR., is manager.**

March 23-24

Frank A. McCord Will Address Ginners

■ LOUISIANA - MISSISSIPPI Cotton Ginners' Association schedules annual meeting in Vicksburg; program announced.

Louisiana-Mississippi Cotton Ginners' Association, Inc., will hold its annual meeting, March 23-24 in Vicksburg, with convention headquarters at the Hotel Vicksburg.

Among the featured speakers will be Frank A. McCord, director, Market Research Section, National Cotton Council, who will give an illustrated address, "New and Increased Uses for Cotton."

Other speakers will be J. Y. Oakes, superintendent, Red River Valley Experiment Station, who will give an illustrated talk, "Chemical Weed Control in Cotton"; Louis Hansberger, manager, U.S. Testing Laboratory, Memphis, will speak on "The Amazing Scanor-Tron," also an illustrated talk; and Mose S. Shaw, associate director, Extension Service, State College, Miss., who will discuss "Cotton's Need for Local Promotion," followed by a panel discussion reviewing and appraising this activity in Mississippi.

• **Entertainment**—A get-together luncheon has been planned for Wednesday noon in the Plantation Room of the Old Southern Tea Room. There will be a guided tour of the National Military Park and of Vicksburg ending at Anchuca, that afternoon for the ladies. In the evening the group will board the showboat, S. S. Sprague for dinner, followed by a special performance of "Gold in the Hills" by the Dixie Showboat Players.

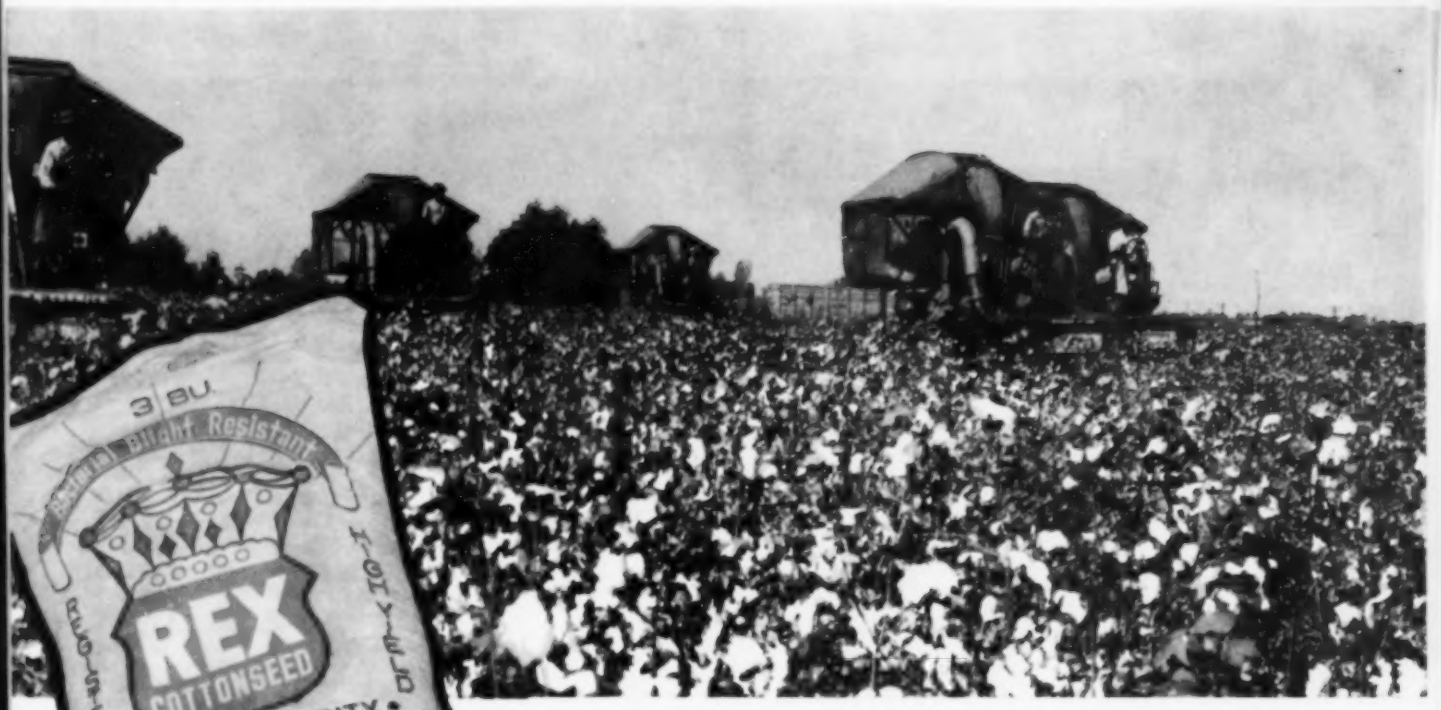
Thursday morning the ladies will be entertained by the Louisiana oil mills at a champagne breakfast in the Plantation Room of the Old Southern Tea Room. And a highlight of the meeting will be the showing of the film "Dust or Destiny" from the Sermons from Science Series produced by the Moody Bible Institute.

• **Association Officers** — Eugene Fisackerly, Blaine, Miss., has been president of the group this year, assisted by Dan Foose, Thornton, Miss., vice-president; Dan Logan, Gilliam, La., vice-president; G. M. Lester, Jackson, Miss., treasurer, and Gordon W. Marks, Jackson, executive vice-president and secretary.

MOSE S. SHAW

FRANK A. McCORD

■ **ED HAWKINS has succeeded A. C. SMITH as manager of Rio Hondo (Texas) Cooperative Gin.**



Here's Why The Many

SMALL VARIETAL DIFFERENCES

... of Crown Brand REX Cotton Seed Add Up to So Much for

LARGER PRODUCERS

Big-Acreage Growers and managers have been quick to recognize the profit-making abilities of Crown Brand REX . . . not because REX is vastly different from other leading varieties in any one feature, but rather the minute differences in numerous individual features.

On small farms even these multiple differences can hardly be seen as being better or worse than any good older variety . . . but multiplied by a number of acres on a large farm, they add up to really different cotton.

Big Farm Owners, who are attuned to the hard facts on the profit and loss statement have been buying REX in increasing quantities for the past three years . . . hence REX has become known in many areas as the "Large-Planter" Cotton.

A check with USDA records will reveal to you that REX was planted in 1959 in tremendously increased quantities, 5-6-700% increase over 1958. In Arkansas, Mississippi, The Rio Grande Valley, The Lubbock Area, it is considered by many expert county agents, agronomists, and experiment stations to be the coming cotton for the next decade . . . it has "arrived" as a leading commercial variety and certainly the favored cotton in many areas.—See the other side for specific varietal characteristics.

CROWN REX COTTON SEED BRAND

REX SEED, INC.

PARKIN, ARKANSAS

Growers and Processors of Rex Cottonseed

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PARKIN, ARKANSAS

Send Me:

- ☐ *Official Experiment Station Yield Test Results*
- ☐ *Name of Rex Seed Dealers near me.*
- ☐ *Price and availabilities on _____ lbs. (100 lb. bags) of Rex* ☐ *Registered* ☐ *Certified Seed.*

NAME _____ PHONE _____

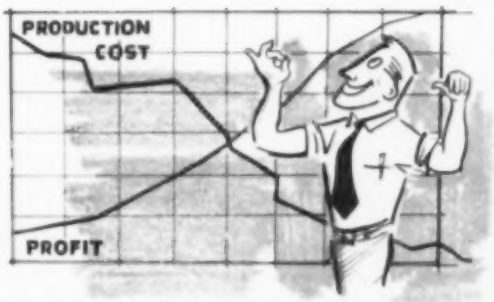
ADDRESS _____

CITY _____ STATE _____

On large farms

CROWN BRAND REX

REDUCES PRODUCTION COSTS AND INCREASES PROFIT



HERE'S HOW . . .

Consider first REX'S proven yield on farms and at experiment stations. Check with Rex producers in your area about yield-per-acre. You'll find Rex is indeed a high-yielder, always near, or at the top of the list. If you like, write us, and we'll send you a copy of the official test for your area.

Secondly, consider production costs. This factor makes even more difference in the profit picture than yield. Making a high yield doesn't mean making more profit . . . far from it. We can always use more fertilizer, chop more, use more cultivations and insecticides to increase yield, but every large farmer knows what this will mean. Production costs and yield must be properly balanced—Production costs must be kept down! . . . The ability of modern Rex to tend to reduce production costs is what really makes it different from the *good, older commercial varieties*. Specifically, these varietal differences are:

Early Maturity—Means you will harvest 10 to 14 days earlier. If you save only one poisoning (and it's possible, in some cases, to save several more) think of the additional profits you will make. Consider too, the possibility of a labor shortage, a wet fall (the later, the wetter) and late cultivations. Remember too, that an early cotton is a white cotton and generally brings a better price. You're ahead at mid-season too, because Rex squares and makes bolls very early . . . usually before boll weevils have reached their peak emergence period.

Disease Resistance—Rex is nearly 100% resistant to Fusarium Wilt and Bacterial Blight (Angular Leaf Spot). These two common cotton diseases rob farmers of over 567,000 bales production and profit each year. Ask your county agent more about this aspect of Rex cotton.

Seedling Vigor—Rex comes up growing. It is very hardy and withstands wind and cold well, thus reducing the possibilities of costly replantings.

Why You Should Insist On Crown Brand—Crown Brand means you will secure not only a seed that is processed with loving care, but most important, you have 100% positive assurance that all the varietal characteristics of Rex is in every single seed sold. Processing of C. B. Rex is not done just in one-variety gin but in gins that have processed Rex *as a single variety for not less than 3 years!*

C. B. REX seed is colored a special bright green so that you can be sure that the seed you buy is genuine C. B. Rex. In addition, C. B. Rex is specially treated with CaCl. After having been rigorously tested for a number of years it has been found that CaCl (calcium) in extremely small quantities would give seedling roots a healthy start and add to the hardiness of the cotton plant. This is just another of the newest agri-science developments that you can take advantage of when you buy C. B. Rex.


The Green CaCl-treated seed

What About The Quality and Marketing Of REX? Rex has been tested by the U.S.D.A. for the past two years. Micronaire, sugar-content, spinning and carding characteristics, whiteness, staple length, grade, and the many other factors affecting the purchase price a buyer will pay for your crop of Rex is public information in U.S.D.A. Bulletin #206. Get this bulletin and compare Rex's quality.

Where To Buy Your C. B. REX—Just ask your regular cottonseed dealer about C. B. Rex—the "Larger-Planter Cotton"—he'll be glad to handle your order, or mail the attached card.

No Postage Stamp Necessary If Mailed in the United States

Postage Will be Paid by Addressee

BUSINESS REPLY CARD
First Class Permit No. 7, Sec. 34.9 P. L. & R., Parkin, Ark.

REX SEED, INC.
PARKIN, ARK.

ATTN: SALES DEPT.

CROWN REX COTTON SEED BRAND

REX SEED, INC.
PARKIN, ARKANSAS
Growers and Processors of Rex Cottonseed

Photos by Cotton Council staff.

SOME LEADERS who participated in the Western Cotton Production Conference at Bakersfield, Calif., are shown here. The picture on the left shows, left to right, Marvin Hoover, Extension cotton specialist, Shafter, Calif.; Waldo Weeth, producer, Coalinga, Calif.; Jim Bowden, producer, Tornillo, Texas; Joe Sheely, producer, Peoria, Ariz.; and Dan W. Clarke, Tucson, president, Arizona Cotton Growers' Association. In the scene on the right are John H. Miller, U.S. Cotton Field Station, Shafter; Richard B. Bahme, National Plant Food Institute, San Francisco; Mike Maros, president, El Paso Valley Cotton Association, Fabens, Texas; Audy J. Bell, J. G. Boswell Co., Corcoran, Calif.; and Larry B. Nourse, California Planting Cotton Seed Distributors, Bakersfield.

Cotton Quality Preservation Is Western Conference Theme

Production practices that will help reduce costs while improving competitive position of lint are emphasized at Bakersfield.

FIVE HUNDRED LEADERS in cotton production, including growers, research and extension workers and others, met in Bakersfield, Calif., March 1-2, 1960, for the Western Cotton Production Conference.

With Quality Preservation as the theme emphasized, speakers brought out the necessity of maintaining present markets and gaining new sales for cotton through careful attention to quality.

Held at the Bakersfield Hacienda, the conference was sponsored by the Southwest Five-State Cotton Growers' Association and the National Cotton Council. Cooperating with them were the Arizona Cotton Growers' Association, El Paso Valley Cotton Association, the agricultural chemicals industry, USDA, vocational agriculture, land-grant colleges, farm organizations and others.

The local host in 1960 was California Planting Cotton Seed Distributors.

The following material constitutes the summary-proceedings of the Conference, and is being distributed by the sponsors as reprints from The Cotton Gin and Oil Mill Press:

Phoenix To Be Host To Conference

Sponsors of the Western Cotton Production Conference have announced that the 1961 meeting will be held in Phoenix. The event will be held early in March, as has been the custom.

The headquarters for the 1961 Conference and the exact dates will be announced as soon as arrangements are completed.

Opening Statement

JOHN P. BENSON

General Chairman and President, Western Cotton Growers' Association, Fresno

In 1951 cotton growers of the five Southwest States met for the first time to set off a series of annual conferences held specifically to study problems peculiar to the Western irrigated area. As I turn my attention to the program getting under way this morning, I can't help comparing it—and the situation of Western cotton production—with that of nine years ago when the first conference was held.

At that time we were just getting our yields up to a bale and a quarter and a bale and a half per acre. Labor was getting scarcer and more expensive. Mechanical harvesting was on the move and it was becoming obvious that we would have to rely more heavily on it in the future. Consequently, the first conference centered around defoliation—a must for proper mechanical harvesting. Defoliation was fairly new to most of us and we needed to know more about it.

Of course, we realized that defoliation was just one of many subjects worthy of and needing attention. So the second conference program was expanded to include insect control as well as defoliation. In subsequent years, programs covered nearly all subjects of importance in the production of a higher-quality product at lower costs—two basic ingredients of a strong cotton industry.

The program beginning today will emphasize quality, but efficiency also will receive lots of attention. Continued improvements in both offer the only real hope for strengthening the demand for cotton while still returning producers a reasonable profit.

It would appear that these are two distinct and different categories and actually they are. However, as we get into the program today I think we'll see some definite and positive interrelationships connecting them. Unfortunately, the two objectives often seem to be in direct conflict with each other. Things that seem desirable in preserving quality are often

contrary to keeping production costs down and vice-versa.

A good example of this is fiber damage resulting from excessive drying and cleaning at the gin. This problem originated when producers began changing to mechanical harvesting in an effort to keep down costs.

While some of our quality problems are the result of gains in production efficiency, I don't think anyone here would advocate solving them by retreating to less efficient practices of former years. To do that would be to price ourselves right out of the market and I think we know the final outcome of that. Rather, we've got to learn to live with the progress we've made and use all the knowledge at our disposal to provide a top-quality fiber at the lowest possible price.

And that gets us back to why we're here today. First, we'll hear a report on how cotton is doing. Then there will be discussions of qualities needed by mills, how those qualities are developed, and how they are affected in production and ginning. We'll hear ways to cut costs through better fertilization, good weed control and more effective insect control.

All of these subjects are of utmost importance and significance in cotton's future. As we hear them discussed I think we'll see that although much progress has already been made, there are some real opportunities for further improvement. The aim of this conference is to point out some of those opportunities and to emphasize the vital necessity of taking advantage of them.

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How Is Cotton Doing?

J. RITCHIE SMITH
Head, Educational Services, National Cotton Council, Memphis

Right now cotton consumption is booming. U.S. mills seem certain to consume more than nine million bales this season. Total exports are likely to be six to seven million bales. This is a rather pleasant contrast with the situation last season when our total off-take was only 11,500,000 bales—some four million less than the projected off-take for the current season.

However, if cotton is to have a sound future, we must base our plans on fundamental, longer term forces at work in our market.

• **Domestic Trends** — First, let's look at our domestic market. For a long time, total consumption of cotton has shown no upward trend. Instead, it has held close to an average annual rate of nine million bales. However, our domestic market has been anything but static. Several things have been happening.

Let me give you a fact that has even our closest students of the subject rubbing their eyes. During calendar 1959, the amount of cotton used in clothing in the U.S. was almost half a million bales greater than it had ever been before. We would naturally expect the clothing market to have been better last year than in the recession years of 1957 and 1958. But an increase of 500,000 bales over the previous all-time records set in 1955 and 1956 is something else again.

To get some measure of the annual rate at which this market has been growing, go back to 1948 — another textile boom year. And over this span of 11 years, on an average, the amount of cotton consumed in clothing has increased by more than 150,000 bales each year.

Several things about this seem especially important:

First: The clothing industry in this, the richest country in the world, is a growth industry. This is a flat contradiction of an old economic doctrine which holds that as a country becomes richer, consumers become more interested in other luxuries and relatively less interested in clothing. U.S. experience shows that this is not true. Our clothing industry has grown at a rate well in line with the average growth of our over-all economy, slightly better in fact.

Second: Cotton has proved well able to stand up to competition in this expanding apparel market. It has upped its share by six percent during the past decade . . . from 55 percent to 61 percent of the total fiber consumed in this market.

Then, why has our total domestic market failed to show any growth? It failed to expand because—while we were enjoying a healthy expansion in apparel uses—we were taking some hard losses in certain other end-use markets. We have lost nearly all the tire market, much of the bag market, and about half the net export market we once enjoyed for manufactured textile products.

The number one fact in our outlook is that clothing is now the dominant part of

our domestic market; three-fifths of all the cotton consumed domestically now goes into clothing. We believe this outlet will continue to expand.

In that other two-fifths of the domestic market, we need not continue that kind of losses we have experienced. Certainly, we cannot again lose those big markets already lost—and we are fighting a determined battle to check the other losses. If we can check these losses, and continue the gains we have been experiencing—we face the opportunity to have our domestic market increase by an average of 250,000 bales yearly.

All in all, the outlook for our domestic market seems brighter than at any time in the post-war period.

• **Export Outlook** — Now, what about our export market? Since World War II, we have seen an impressive upward trend in foreign consumption of cotton. During the 10 years ending with 1956-57, the consumption in the Foreign Free World increased an average of 800,000 bales each year. Then, during 1957-58, we were jolted by a rather sudden letdown in foreign cotton consumption—a letdown which continued well into last season.

The more our economists analyzed this thing, however, the more convinced they became that the whole foreign textile world was in the down-side of the first really big post-war recession. For a good many months now, we have seen this cycle turn and start upward. Foreign textile production is booming. The International Cotton Advisory Committee estimates that mill consumption abroad will increase 1,200,000 bales over last season.

The long-range upward trend in foreign consumption seems to have lost none of its underlying force. Population continues to grow at an explosive rate; standards of living generally continue to improve; more recently, sales promotion programs of Cotton Council International have been put to work for cotton in many foreign countries. Add to this the fact that per capita consumption of fibers nearly everywhere else in the world is far below our own. All in all, it would seem that only a devoted pessimist could close his mind to this strong upward trend in foreign consumption — and the bright prospects for its continuing well into the future.

However, that is only half of the picture. It's the difference between foreign consumption and foreign production that determines the size of our exports. If our export market is to grow, then foreign consumption must expand faster than foreign production.

There are many forces determining the trend of cotton production in each foreign country: The desire for economic self-sufficiency, the desire to earn foreign exchange, and so on. But cutting across nearly everything else is the world price level of cotton.

It has been four years since world price level went into a rather sharp decline; the trend of cotton production has been a lot less dynamic than you might think. There have been some sharp ups and downs in production; but how does it look when you take out the effects of yield fluctuations?

Our people compute what they call "normalized production" of cotton in the Foreign Free World. This simply involves multiplying the acreage planted to cotton in each country by a "normal" yield—one which allows for any discernable upward trend, but which evens out the random yearly fluctuations due to weather.

For the last four seasons—beginning

with 1955-56—this "normalized production" has shown very little net change for the whole Foreign Free World — an increase of only a few hundred thousand bales.

This is in sharp contrast with what had happened previously. During the eight seasons beginning with 1947-48, "normalized production" in the Foreign Free World increased eight million bales—an average increase of a million bales each year. From the standpoint of our exports, this was more than enough to cancel out the sharp gains in consumption — gains which otherwise would have enlarged the market for U.S. cotton.

To sum up the foreign production picture, the very disturbing upward trend seems to have leveled off for the present. If we put this alongside the picture of foreign consumption, we see that there are most interesting possibilities for the gap between foreign consumption and foreign production to widen. As that gap widens, it can bring us an export market growing at an average rate of about half a million bales each year.

• **Competitive Problems** — Adding up our market outlook, at home and abroad, we seem to have a potential for increasing our total off-take something like three-quarters of a million bales a year. But I must emphasize that this is a potential market; in no sense do we have any guarantee that it will materialize. It is available only if we meet our competitive challenges. This brings us to some of the basic issues that are involved.

Without trying to agree on precisely what "competitive price" means, we can agree that the price at which U.S. cotton sells — especially for export — is now decidedly more "competitive" than it had been until just a few years ago. And the fact that our market outlook is so much improved largely reflects the fact that our price has become more competitive. We experienced a practical demonstration of how becoming more competitive in price can improve our market position. We must recognize, however, that the favorable price at which we are able to place our cotton on the market now depends very heavily on government subsidies. This is not something that we can take for granted indefinitely.

We must recognize also that the producer is being seriously squeezed by the higher prices he is having to pay for the things he must buy.

This brings us to the big and difficult challenge confronting our industry. For cotton to have any future, the producer's situation must be profitable enough, and dependable enough, to justify the kind of investments that modern farming methods demand. The producer must have confidence in the future of this business. In order to have this confidence he must move toward less, not more, dependence on government subsidy. But with costs pushing upward, where do we turn for an answer? It all points straight toward a force which holds the difference between life and death for our cotton industry: the force of research.

We can see here more clearly than ever before the desperate need for stepping up research aimed at pushing down costs and improving quality. The pay-off for faster progress in this whole field of production technology is so large and so important that we simply cannot afford to disregard it.

◆ ◆

Cotton Fiber Qualities Needed by Mills

JOHN P. ELTING

Director of Research Laboratories, The Kendall Co., Paw Creek, N.C.

Serious penalties are being experienced by mills with the general run of commercial cotton available today. Troubles have become increasingly serious during the past 10 years. Today penalties to mills from excessive yarn breakage, high loom stoppage and low fabric quality approach catastrophic proportions. Not only do mills have to pay more for cotton, but, after incurring operating penalties ranging up to five cents or more per pound, the resulting fabric is frequently unmarketable for its intended use.

The most critical qualities needed by mills in order of decreasing importance are:

1. Short fiber content
2. Fiber strength
3. Fineness and maturity
4. Trash components
5. Additives

• **Additives—Accidental or Intentional**— Relatively small quantities of oil on lint can and frequently does change an otherwise excellent spinning cotton to one that is almost impossible to spin. At about 0.3 percent of oil on the cotton, yarn begins to lose strength. In some areas water dispersible oils are being

used to assist in harvesting and for flushing spindles. On occasions lubricating oils get onto cotton from harvesting machines.

If oil applications could be accurately controlled at relatively constant very low levels, small amounts might not be objectionable. I would urge you to avoid intentional use of oils whenever possible, and to maintain a high level of maintenance on machines to avoid accidental contamination.

This year, many mills using California cottons are experiencing serious sticking of fibers to rolls of processing machinery. Historically, this has been accounted for either by aphid honeydew or extreme fiber immaturity. This year something is different.

What is causing this sticking? If not aphid honeydew, and the cottons are not excessively immature, it must be due to some relatively new factor. Is this the result of a wetting agent or other chemical or might it be something in the fiber itself as consequence of out-of-balance growth factors?

Recently a large chemical concern has been promoting the use of colloidal silica as a harvesting and ginning aid. Mills have had considerable experience with this substance. It can be beneficial to spinning in restricted and specific cases when and only when its application is most carefully controlled. To have this material present in some bales and not in others, to have uncontrolled amounts, could well put a mill flat on the floor.

The excellent spinnability of the cotton fiber is highly dependent on its delicate surface properties. I urge you to approach the use of chemicals which are retained on the fiber with great caution, and use them only after thorough appraisal by mills.

• **Trash Components** — Normal leaf and stem of appropriate grades is not objected to by mills if the trash is not ground up so finely that our cleaning machines cannot remove it.

In particular, however, I would call your attention to two components of trash which are causing immeasurable penalties in product quality: (1) Unfertile or "abortive" seed, and immature seed; and (2) micropylar tips with portion of seed coat attached.

The seed, especially abortive ones, break into a myriad of tiny fragments either at gin saws or following cleaners. Because these particles are small and concealed with fuzz, they are not readily seen and their presence is not reflected in grade.

Because the tiny seed particles and the mircopylar tips (with portion of seed coat attached) carry fibers, they become so firmly entangled with other fibers that our cleaning machines cannot remove them. The tiny seed particles go all the way through processing into the yarn and fabric causing defects called "neps" in the trade. It has been authoritatively reported that even the elaborate combing process fails to remove all of them.

The micropylar tip produces still another effect. It remains on or near the surface of the yarn and, being extremely hard and sharp, cuts adjacent yarns during weaving. This produces further fabric defects and reduction of efficiency.

Clearly, those circumstances which promote excessive occurrence of unfertile seed, and cause the micropylar tip to fail to break off clean, must be related to field conditions and practices. Again I urge you to follow those practices which encourage normal plant growth, seed fertility and development. Avoid practices which result in an out-of-balance of growth factors.

• **Fineness and Maturity** — These qualities are grouped for two reasons: (1) The instrument most commonly used (the Micronaire) does not distinguish between them; and (2) since fiber fineness is fundamentally a varietal characteristic, differences in "fineness' noted in San Joaquin Valley cottons are primarily those of maturity rather than fineness.

These two qualities bear significantly on the spinning value of the cotton. For a quality product, mills avoid immature fibers over and beyond those which occur in normally mature cottons. Immature fibers produce the true "nep," a very serious quality imperfection.

Fineness, on the other hand, is highly significant to mills in another way. Coarse fibers generally spin with some difficulty and produce weak yarns; this phenomenon is exaggerated severely when coarse fibers are also short. The unfortunate combination of coarse-short fibers can put a mill flat on the floor. To spin well when referring to any particular size of yarn, coarse fibers must be long, short ones must be fine.

• **Fiber Strength** — Strong fibers are essential to satisfactory and efficient mill processing. California growths have been outstanding in this respect. This accounts in part for the demand that has existed for your product.

There is an increasing number of consumer products as well as industrial and

military textile products requiring high strength. To the now-large number of mills involved with such products the high fiber strength offered by the California growth is absolutely essential.

To the relatively few mills not involved with high strength products, fiber strength remains essential to processing. It is frequently necessary to utilize the strength of California cottons to "carry" other weaker, but less costly cottons through processing.

Two essential points to be emphasized are: (1) The strength that matters is the final strength of the yarn and fabric; and (2) the strength of the final product is basically dependent on fiber strength, but not on strength alone. The final result is dependent on fiber strength, fiber length, fiber fineness and fiber surface properties.

In short, the highest fiber strength is of little value if the fiber does not also fulfill other requirements, especially that of length. This brings me to the most important quality—fiber length, and in particular the relative proportions of long and short fibers in cotton.

• **Short Fiber Content** — A fiber can contribute its qualities to an assembly of fibers only to the extent that the fiber is a part of the assembly. Thus, in the final analysis, and with the exception only of the trash components, the consequent effect of all fiber qualities depends upon fiber length.

As you fully realize, when we speak of "length" we refer, not to the length of any particular fiber, but rather to measures descriptive of the distribution of many fiber lengths in varying proportions. Two measures are useful and revealing. These are upper half mean length and percentage of fibers one-half inch and shorter.

These qualities are measured readily on the Fibrograph. The first is—or I had better say—has historically been closely related to classer's call of "staple length." The second is the proportion by weight, of the whole, composed of fibers whose length is one-half inch or less. The choice of "one-half inch or less" criterion, while arbitrary, is supported by strong circumstantial evidence that this group of fibers actually detract rather than contribute to yarn quality.

Time does not permit supporting statements for each of the numerous complex details of this fiber length problem. The following are facts:

1. Each time cotton is handled in a cleaning or processing machine, fibers are broken. This is true in the mill as well as in the gin. Some gins have added up to 32 cleaning cylinders in "overhead" cleaning stages, and up to three cleaners following the gin stand.

2. Damage to fibers is roughly proportional to the square, or second power, of production rate, since the forces set up increase faster than the rate at which material is moved. A gin with four or six stands handles cotton at least four times the rate employed by an average mill.

3. Long fibers are most vulnerable since there is more of each exposed to the action of the machine teeth which move the cotton.

There are two consequences: (a) Some of the longer fibers are broken. This shortens slightly but significantly the upper mean length. Each long fiber which breaks produces at least two short fibers. The number (percentage) of short fibers increases rapidly while the upper half mean length decreases slightly. (b) The decrease in upper half mean length is often not sensed by the classer, but the change produces dramatic effects in the processing machines of the mill and in yarn quality.

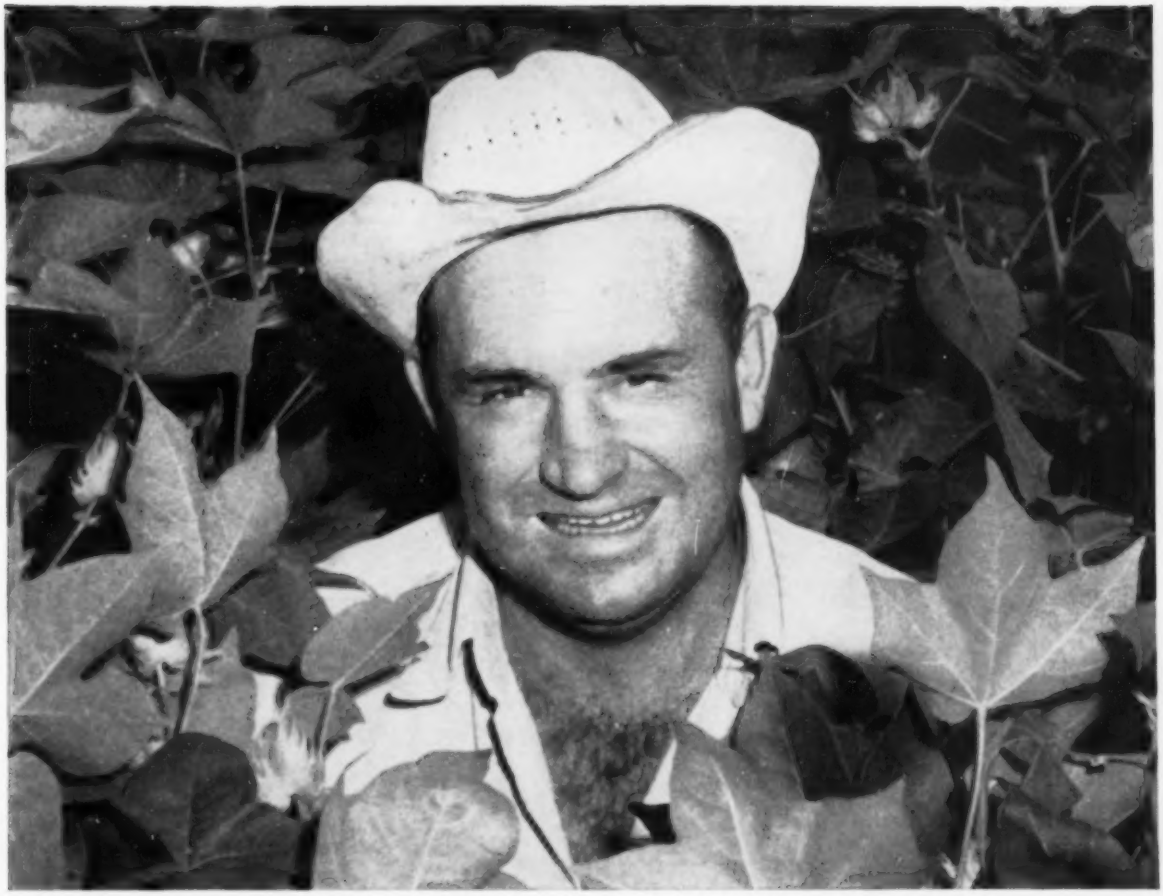
4. Further, you have added heat. This, the USDA has shown, changes the internal structure of the fiber making it more compact and brittle. The work, and hence the force necessary to break the fibers, is reduced as much as 40 percent while hot.

The preceding facts add up to the net result that the modern gin must inherently do vastly more damage to cotton than the old simple gin to which the industry and its standards were adjusted.

The familiar USDA "Joanna Mill Test" revealed that heated cottons which had been exposed to "excessive" cleaning, contained up to 10 percent fibers shorter than one-half inch. These were the worst performing cottons and represent totally unacceptable spinning quality. Experiments conducted in Kendall plants substantiate this.

Gentlemen, I would like to leave with you my sincere belief that the technological problems of quality, those of the producer and the needs of the mills are not incompatible as many may think.

In the Joanna Test, length was greatest, percentage of short fibers was lowest, when moisture content was over five percent. The test also shows that in the main these same cottons produced maximum return to the grower. This was



"ORTHOCIDE® SOIL TREATER X GAVE ME A STRONG, UNIFORM STAND"

says cotton grower A. E. Yelvington

"Even with low germination seed, I got a strong uniform stand when I used ORTHOCIDE Soil Treater X," reports Mr. Yelvington. "I left 8 rows untreated and you could really see the difference. In the early stages these 8 rows had more skips and dying cotton. And, in spite of the fact that we planted 3 or 4 days later than the year before, the cotton was a good 3 weeks earlier."

ORTHOCIDE Soil Treater X creates a protected zone in the furrow—allows tender seedlings to develop normally despite cold, wet, infected soil.

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based on actual prices paid, adjusted for the fact that the producer sold fewer total pounds of cotton because of moisture, trash and lint loss when cotton was excessively dried and cleaned at the gin.

Had these same cottons been sold in Fresno this past year where actual grade differentials were narrow the producer would have gained about one cent per pound had he processed the cotton at a moisture content which would have yielded spinning value.

In summary, I would re-emphasize the five qualities most needed by mills.

Second, I would emphasize that preservation of cotton quality not merely begins, but much resides in the field.

Third, the modern elaborate gin is inherently destructive to the most vital cotton quality—fiber length.

Fourth, I am convinced that your problems and ours are not entirely incompatible; that energetic, systematic, scientific and cooperative efforts will solve them.

◆ ◆

The Cotton Fiber—How It Develops and Is Affected in Production

THOMAS KERR

Head, Cotton Quality Investigations Section, Cotton and Cordage Fibers Research Branch, ARS-USDA, Beltsville, Md.

In the development of the cotton fiber, the inherent properties of length are determined in the first 16 to 18 days after flowering.

Inherent properties of strength are determined within 18 to 35 days after flowering.

Inherent properties of maturity are determined by the rate of cell wall thickening from 18 days after flowering onward, and also determined by how long it takes the boll to develop.

These properties are influenced, of course, by both breeding and environment.

They are preserved, or may be injured, by the way in which we handle our cotton and gin it.

My own field of work is concerned with improving the two inherent properties—length and strength. We are striving to understand these properties—to learn to measure them—to relate length and strength to yields per acre.

• **West's Contribution Outstanding**—The Western States of our American Cotton Belt have made a wonderful contribution to the cotton industry. Throughout the cotton world, the Barbadense cottons account for 10 percent of total production.

In the U.S., however, our Barbadense cotton (Pima S-1) amounts to less than two-thirds of one percent of our production. With our imports, about two percent of our U.S. consumption is Barbadense.

As all of you well know, yields of the Barbadense cottons are lower than those of Upland.

Our Western States, however, have made a notable contribution—one that is unique—by getting the same desirable qualities that the rest of the world obtains from Barbadense cottons out of our Upland cottons—out of 1517 and Acala 4-42.

Our West, in other words, has combined quality and production as they have been combined nowhere else in the world.

The American textile industry is geared to this fact—it is dependent upon our Western States continuing to provide this quality. The specifications of our

(Continued on Page 45)

COLLERETTE THANKED

The following resolution was passed unanimously by those attending the conference:

"WHEREAS, Cecil Collerette of Casa Grande, Ariz., has been chairman of the Production and Marketing Committee of the National Council for many years and has helped promote the Western Cotton Production Conference since its inception, and

"WHEREAS, he spent a great deal of his time and means promoting the interest of cotton growers of the nation, and

"WHEREAS, his presence from this meeting is sorely missed, therefore, Be It Resolved that all in attendance here express their deep regret at his absence, and sincerely hope for a speedy recovery that he may be with us again at our following meetings."

Old Timers Will Attend Ginners' Convention

Many veteran cotton ginners will be among the more than 5,000 persons at the Texas Cotton Ginners' Association convention in Dallas, April 3-5. (See story on Page 8.)

Among the elder ginners who plan to attend the convention are E. C. Gaines of Robstown. He's 75 years old and still active in the management of his cotton gin. He started in the business 63 years ago when the gin stand was fed from a basket. The cotton was blown into a stall where bagging was wrapped around the processed cotton.

W. H. Skinner, Honey Grove, 76, remembers driving six horses to furnish power for one gin stand in Mississippi. He was six years old at the time and has been in the gin business since then. He has been attending the Association convention regularly since 1920.

Although he has taken his son in as a partner, E. H. Wied of Nordheim remains active in his gin operation, which he founded in 1904.

K. T. Cook of Three Rivers operated his first gin in 1890 for his father at Hope, Texas. Cook was born in 1874.

Frank B. Lam of Oglesby in Coryell County is 80 years old, and the second generation of his family in the gin business. He worked at the gin as a young boy and took over active management when he was 18. He still manages the gin and water works at Oglesby.

Then, there are other oldtimers like Roy M. Hopkins who has been in the business 40 years at Corsicana. M. G. Duncan of Gilliland has operated a gin 47 years and missed only two state conventions.

Floyd Weeks of Wills Point counted his thirty-fifth ginning season in 1959. A. N. Robertson of Hillsboro is 78, having retired from the business in 1958 after 58 years of business.

There are a few youngsters like Tom Blomquist who has worked at cotton gins 41 years. He's 58 years old. Ray Martin of Dimmit has been working in cotton gins 36 years and he's a year shy of 50 in age.

He Likes Corn Cobs

Protein Meals Going Out, Urea Booster Claims

Urea and corn cobs will completely replace oilseed meals in the rations of ruminants within five years, Roswell Garst of Coon Rapid, Iowa, recently told the Grain and Feed Dealers' National Association.

This is not the first time that Garst has expressed his opinions, which are not shared by many feeding authorities, as to the value of low-quality roughage supplemented with urea. On Nov. 21, 1952, the Fort Worth (Texas) Star Telegram said: "Speaking at the Texas Livestock Roundup, Roswell Garst . . . predicted that cottonseed and other protein meals will not be used for cattle and sheep within five years."

Garst also gained publicity as host to Russia's Nikita Khrushchev when they visited Iowa last year.

Garst said that because "oil is a drug on the market," oilseed meals have become primary products rather than by-products and therefore must bear a larger share of the crushing costs. Feeding of urea in the type of ration he is feeding provides a cattle diet available for $20 a ton less than more conventional cattle feeds, he said.

"One-third of our protein meal supplies are going to ruminants, which is robbing chickens and pigs of a feed they can use more efficiently than ruminants can.

Garst also predicted that fewer soybeans will be raised in the future — "seven cent oil doesn't raise beans"— and that relatively smaller supplies of soybean meal will be available. Also, he said that changes in paint products are reducing demand for linseed oil and will adversely affect linseed meal supplies.

McMahan Leaving Association

E. O. McMahan, who has been executive secretary of Carolinas Ginners' Association for the past three years, has asked to be relieved of these duties. On March 16, he returned to his work with Taylor Chemical Co., which he has been doing in the past after the cotton ginning season was over.

■ **J. E. MOSES, retired cottonseed crushers' association official, has moved into his new apartment building at 770 Myrtle, N.E., Atlanta.**

Copied Hardwicke-Etter

Russians Claim Gin Inventions

Russians now claim they were the first with an advanced cotton gin design which Hardwicke-Etter of Sherman, manufacturers of cotton ginning systems, thought it originated. And the Hardwicke-Etter people are chuckling over the latest Soviet brag.

The absurdity came to light in Sherman recently with the arrival of an official Russian technical newspaper which gave two columns of detailed description of new Hardwicke-Etter gin machinery. With it was a two column drawing taken from Hardwicke-Etter advertising material.

After a lengthy discussion of the Sherman-made lint cleaner (which the writer liked very much) the newspaper tosses in this offhand comment: "It has already been five years since the Control Scientific Research Institute of the (Russian) Cotton Industry designed a similar machine . . . Thus the operating practice of the U.S. cotton industry has confirmed the correctness of our move in this direction."

Actually, Hardwicke-Etter introduced its lint cleaning machinery to the industry in 1949, company officials said. And, before that, in 1946, Eugene H. Brooks, now president of Hardwicke-Etter, developed the first lint cleaner produced in this country when he was associated with Continental Gin Co.

Hardwicke-Etter sales promotion man, Otto Vehle, said that apparently the Russians first learned details of the Hardwicke-Etter machinery last fall. It was last November that three Russian engineers visited the Sherman plant on a tour arranged for Soviet technical men by the U.S. State Department. At the request of the State Department, Hardwicke-Etter agreed to receive the Russians, one of whom was an interpreter.

Wanted Blueprints

Vehle said the Russians jolted him right off by asking for a set of production blueprints of the gin machinery. His refusal didn't dampen the Russians' enthusiasm over Hardwicke-Etter equipment, especially the lint cleaner.

Not being an engineer or technical man himself, Vehle was able to answer only elementary questions asked by the visitors, giving information that is generally known about Hardwicke-Etter gins. So, the Russians smiled, accepted some advertising literature, said thank you and left.

What puzzles Vehle now is that the newspaper article had a great amount of complex engineering detail about his company's gins, including low tolerance measurements of working parts. Vehle theorizes that at other places on the Russians' tour of the nation they came across Hardwicke-Etter gins in the field and found operators who gave them answers in detail.

As far as Hardwicke-Etter knows, none of its gins has reached Russia. Vehle said the drawing reproduced by the Russian newspaper would be of little help to the Russians—or to Hardwicke-Etter's competitors in this country. He said some technical drawings for Hardwicke-Etter's advertising material are always changed by an artist in order not to give away design secrets.

Another interesting feature of the newspaper article was the author's criticism of a Kremlin decision and an admission of Soviet inefficiency. He criticized the Kremlin for its decision to produce separate parts of a cotton gin at separate plants instead of manufacturing all components at a single plant. He admits inefficiency in several areas of Russian cotton production.

The newspaper article, written in the Russian language, was translated for Hardwicke-Etter by the foreign languages department of the University of Colorado.

Cotton Subsidy Cut By Two Cents

USDA has announced that it will cut the cotton export subsidy by two cents a pound on Aug. 1. The Department commented that this reduction should make U.S. cotton "available in world markets at prices near those now prevailing." USDA will continue the payment-in-kind program of the past two seasons, but at the rate of six cents a pound after July 31.

Missouri Producers Meeting

Missouri Cotton Producers' Association will hold its annual meeting March 25 at Caruthersville. Representative Harold D. Cooley of North Carolina will be the principal guest speaker.

■ **BILL MEYER is advisor to the Junior Achievement Group sponsored by Producers Cotton Oil Co. The young people produce mosaics for a firm named Prodmoco.**

• Research Committee Assignments Made

ASSIGNMENTS to subcommittees of the Advisory Committee of the Cotton Research Committee of Texas have been announced by Burris C. Jackson, Hillsboro, chairman of the advisory group. They are:

Policy Steering Committee—Jackson, chairman; J. B. Brady, Spencer Brown, Ed Bush, O. B. Haney, Aubrey Lockett, Walter B. Moore, George Pfeiffenberger, Jack J. Stoneham, Jack Whetstone, and R. L. Horton.

Ginning and Marketing Research Projects Committee—Stoneham, chairman; Earl E. Berkley, Joe Davis, Roy Forkner, Robert T. Hoover, Jr., John D. Locke, A. Starke Taylor, Jr., Jack Towery, Peary Wilemon, and Glen Witts.

Cottonseed and Production Research Projects Committee—Horton, chairman; Fred Elliott, Lee Elwood, Garlon Harper, Harold D. Loden, J. S. Morrison, J. H. West, and Whetstone.

Textile and Utilization Testing Research Projects Committee — Berkley, chairman; Haney, Elliott Knox, Claud Mast, Pfeiffenberger, Dan Poole, Towery, and Witts.

National Co-Ordination Research Committee—George S. Buck., Jr., chairman; Vernon Moore, Leonard J. Watson, and Rodney Whitaker.

■ **FLETCHER JONES, Producers Cotton Oil Co., is an accomplished cartoonist, who has sold two of his safety cartoons to a California insurance firm.**

New Products

COTTON PICKERS ATTRACT ATTENTION IN WEST

Two mechanical cotton pickers which are attracting attention in the Far West were mentioned in a recent issue of Arizona Farm-Ranchman.

United Equipment Co., 3129 West Monte Bello, Phoenix, makes a new version of Rood's Cotton Harvester, which salvages cotton on the ground in the field.

A vacuum cotton picker is made by Victory Tool and Die Co., Fresno. It is described as using a conventional type blower to create a strong vacuum in each of six hoses, using a rubber cap at the end of the hose.

■ **WILMER SMITH, West Texas cotton leader, was made an honorary member of Texas Tech Agronomy Club recently.**

More Cotton in Venezuela

Venezuelan cotton production jumped 28 percent to a record 37,000 bales in 1959-60. Expanded acreage caused the increase, and the nation's seventh gin recently began operation.

Castor Bean Output Rising

World castor bean production will rise in 1960, USDA forecasts, after a two percent decrease in 1959. India and Brazil expect larger crops, and African producers are planting more beans.

• 560,967 Acres Added By "B" Plan Farms

USDA reported that, through March 4, 560,967 acres of cotton had been added to their allotments by farmers choosing Plan B under the 1960 cotton acreage program. March 16 was the deadline for growers to make their choice, and the next report is scheduled on March 22.

Acreage added by growers making Choice B to date by states has been:

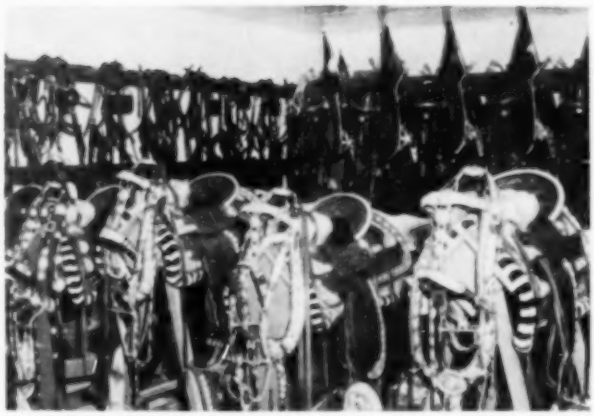
State	Added Acres
Alabama	3,625
Arizona	44,522
Arkansas	34,401
California	170,731
Florida	28
Georgia	977
Illinois	89
Kansas	—
Kentucky	765
Louisiana	4,905
Maryland	—
Mississippi	24,404
Missouri	30,427
Nevada	112
New Mexico	18,206
North Carolina	3,501
Oklahoma	9,366
South Carolina	5,272
Tennessee	10,892
Texas	198,251
Virginia	493
United States	560,967

Insect Report Available

Copies of the thirteenth annual Conference Report on Cotton Insect Research and Control may be obtained from Cotton Insects Research Branch, Entomology Research Division, Plant Industry Station, USDA, Beltsville, Md.

Bates Dewey

He worked with the men who built San Joaquin Valley's cotton empire.



BATES DEWEY, on the left in the top picture, shows Ed Gillespie of the National Cotton Council field staff how it felt to ride atop the stagecoaches which Wells Fargo used to carry the mail in California's early days. The lower picture shows some of the fine silver-mounted saddles and harness assembled by the late Harry E. West, and still used by Coberly-West Co.

By WALTER B. MOORE
Editor

BATES DEWEY IS A PIONEER, though he'd never admit it and you'd never guess it from his youthful vigor. He's young in heart, if not in hair; but he worked with the legendary figures who made Kern County of California the world's greatest cotton county.

Dewey was cordial, but puzzled, when I walked into his offices at the Coberly-West Co. Gin at Shafter recently. He had been warned in advance that The Press wanted to publish a feature article about him; but couldn't understand why.

"Because you pioneered in the San Joaquin Valley cotton business," I told him. He soon set me straight.

"The real pioneers were men like the late Harry West, Saul Camp and W. L. Coberly, Sr.," Dewey insisted; and anyone who knows California cotton history will agree with him. Dewey, however, has the unique distinction of having been associated with all three of these cotton men.

He's a Native

Dewey is a second generation Californian, which is unusual, in itself. His father went to the San Joaquin Valley in 1887 and settled at Rosedale (now practically a suburb of Bakersfield).

About the only other farmers around were English "remittance men," sons of wealthy and titled families who started raising grain and hay but looked back to England for financial remittances.

Dewey, Senior, farmed some 20 acres, using river irrigation. Young Bates grew up on the farm, and was sent to Pomona College as a member of the Student Training Corps in World War I.

After the War, the young man lived at Rosedale, as he does today, and worked around Shafter, where cotton farming was just starting in 1917-18-19.

"It took the cotton men to develop this irrigated farming area," Dewey told us. "Cotton was the most profitable money crop farmers could grow, year in and year out—still is for that matter."

The young man from a farming family, however, started out in a different profession, as young men so often do. Dewey was with Standard Oil Co. until 1934. During these years, he had made friends with the late Harry E. West, who was developing and expanding his cotton operations. West invited Dewey to go to work with him.

West at that time was associated with Saul Camp, who had moved to California from South Carolina in the fall of 1923, and with a former Texan named Lawson Lowe. (Cawelo, a California town, gets its name from these three men.)

When West sold out his interest in Camp-West-Lowe and formed a partnership with the late W. L. Coberly, Sr., Dewey went with this organization, and has been there since. He was a close personal friend of both of these older men, and speaks highly of their personalities and abilities.

Coberly-West Co. has extensive operations in the San Joaquin, including about a dozen cotton gins. One of the firm's most colorful and interesting activities is that of maintaining, as a public service and promotional measure, some vestige of the early days of the Old West.

Relics of the Old West

Harry West collected horsedrawn equipment, and we persuaded Dewey to let us take the picture of him on a genuine, but restored, Wells Fargo stagecoach which once carried the mail in California. A large barn at the home of Mrs. West, just a short distance from the Shafter Gin, contains many other interesting relics of the horse and buggy days.

The beautiful silver-mounted saddles and harness, which are pictured, are among the interesting items in the collection. Others include a coach which the Mexican Revolutionary, Pancho Villa, used and sealed up in a wall to hide—horsedrawn beer wagons and hearses—carts with huge wooden wheels that were pulled by oxen and used to haul logs out of lumber camps—and many others.

The draft horses which Coberly-West used for parades and other special events are largely gone, but beautiful Palominos still pull the stage coach; and the Granite Station Ride by horsemen who are friends of the organization is a colorful event each spring, usually early in April. Granite Station is an old stage stop, now a ranch, where cotton growers and others associated with the organization enjoy outdoor living and eating.

Bates Dewey enjoys this activity, and for many years also was a member of a quartette which sang for its own pleasure; and, at such times as National Cotton Week, on television.

Mr. and Mrs. Dewey are enthusiastic about ranch life, and the nearness of their daughter, her husband and their four children, who live at Bishop, Calif.

The ginner has seen many changes in cotton, such as from horsedrawn equipment to tractors, from hand picking to almost complete mechanization of harvesting, and from small, simple gins to huge plants where television is used by

the manager to keep up with everything that goes on.

Bates Dewey not only remembers these changes, but friends credit him with playing an important part in helping to transform the cotton industry into its efficient operations today. And, they expect him to keep on contributing to progress for many years ahead.

Advisory Committee Reports On Cotton Research

The California State Advisory Committee on cotton research, made up of all segments of the industry, met with John Turner and his staff of research personnel at the USDA Cotton Field Station at Shafter in the Station conference room recently. Each of the major projects were discussed, including entomology, irrigation, fertilization, plant pathology, nematology, cotton physiology, weed control, mechanization, genetics, breeding and strain testing.

After a thorough discussion of California's cotton problems, the committee recommended that the cotton research staff step up their programs in two fields.

First: Research on the practicability of using desiccants as a defoliant, in relation to both staple quality and grades.

Second: Set up an expanded investigation of the various kinds of cotton boll rots, both by plant pathologists and entomologists.

A third recommendation was made that a committee of advisory members survey what has been accomplished in the past five years and what to expect in the next five years. A few committee members were asked to chairman groups to make this survey.

Committee members are: Don Camp, chairman, Bakersfield; John P. Benson, Fresno; Ray Blair, California Farm Bureau, Bakersfield; R. M. Blankenbeckler, Fresno; Doug Davies, agricultural machinery, Bakersfield; Kenneth Frick, Arvin; R. W. Hodson, University of California, Los Angeles; R. D. Martin, Madera; C. S. Morley, agricultural commissioner, Bakersfield; Merton Love, University of California, Davis; Frank Rayburn, Indio; Karl Schneider, Corcoran; C. R. Shannon, Visalia; Lloyd Shimer, Firebaugh; W. L. Smith, Buttonwillow; and Harry Thompson, Bakersfield.

Ex-officio members are: Harry Baker, Fresno; Russell Kennedy, Bakersfield; Ray Provost, Fresno; Marvin Hoover, Shafter, and Larry Nourse, Bakersfield.

India Allows More Imports

The government of India has announced an additional import quota of 50,000 bales of 400 pound gross (equivalent to about 41,000 bales) of cotton stapling one and one-sixteenth inches and above. These imports will be allowed from any country, USDA reports. Half of this quota must be imported by May 31.

Total cotton imports allowed thus far for the 1959-60 season (August-July) are about 694,000 bales.

■ **E. T. HOLLOWELL, formerly NCPA field representative in the Southeast, writes that he likes his work as livestock manager at a North Carolina prison farm; but enjoys keeping up with his oil milling friends by reading The Press.**

Tech Students Touring Texas Cotton Centers

The top three senior students in agriculture at Texas Tech College left March 16 on a tour of various segments of the cotton industry in Texas sponsored by the Plains Cotton Growers, Inc., in cooperation with the school of agriculture at Tech.

Two agronomy students and one from agricultural economics along with a Tech faculty member and a PCG representative toured the Dallas Cotton Exchange, the Rogers Cottonseed Delinting Co., and Lankart Cottonseed Farms in Waco and the Mission Valley Textile Mill at New Braunfels.

Those making the trip included Sam C. Arnett, Lubbock; Wesley Masters, Hale Center; Dicky Hardee, Snyder; Associate Professor Cecil Ayers, and Conrad L. Lohoefer, PCG staff members.

Paraguay's Production Down

Cotton production in Paraguay this season (1959-60) continued the downtrend of recent years, according to USDA.

The current crop, estimated at around 40,000 bales, is down 11 percent from the 1958-59 crop of 45,000 bales, and is 23 percent below average production of 52,000 bales in the past five years. The downtrend is attributed largely to unfavorable climatic conditions, and to price uncertainties.

Smaller domestic supplies will make less cotton available for export this season. Consumption during 1959-60 probably will be around the 1958-59 level.

MET Randy Blackwell of Beaumont, the Texas and National Yoyo Champion, also interviewed on radio that day.

JULIE BENELL, the t.v. personality, interviewed Sandra on her program, and presented her with a gift of cookbooks.

Me 'n the Maid

(Continued from Page 7)

fitting for another style show, then back to the hotel. "There are several thank you notes I must write," she announced, still smiling.

Back in her room, Sandra kicked off her shoes and sat down, apple in hand, to read and relax a bit before dinner . . . . your reporter completely collapsed, panting and with aching feet, into the nearest chair. This assignment may also be the nearest we ever came to running the mile.

So "My Day"—me and the Maid—is over, and as we pondered the fact that

HAIR UP, but lovely, in the midst of a radio interview with Walter Evans. The Maid was given a cotton smock to protect her lovely outfit before the shampoo. "Covered with Cotton," Sandra remarked.

Sandra was in and out of more outfits in a half-a-day, than we own, we wondered how she keeps up the pace. It is a wonderful experience for any girl, of this we're sure, but we can tell you from experience, why there is an age-limit for contestants.

Meet the Maid

Sandra Lee Jennings, the 1960 Maid of Cotton, is all those things you've read about her and more! The one quality of the new ambassador for cotton which im-

AND everyone enjoyed the all-cotton fashion s

LATER met Donna Anderson, the new starlet who also was a t.v. guest. Yes, a Maid of Cotton meets all kinds of people, and really does get around.

LOOKING poised and lovely in cotton.

at the Dallas Athletic Club Country Club.

MEETING friends at the Dallas Cotton Exchange, Marc Anthony (left) and Jack Stoneham.

FINAL touches in the dressing room before the style show.

pressed us the most was how sincerely interested she is; how genuinely friendly, how much she likes people, and it's not an act! It's sincere. Her ability to relax, if only for five minutes, when the opportunity presented itself, was a quality we envied. But when someone spoke to her, her eyes sparkled and she was immediately alert and interested.

Beauty—brains—personality—what a combination! But this is your 1960 Maid of Cotton. Besides all of this, she has other qualities which make the Maid of Cotton for 1960, outstanding. She can step into any dress of her size, in any store in any city, without worrying about a fitting problem, or the hem being too short or too long; she is completely at ease on her feet, is in control of any and every situation; and has a lovely speaking voice. It is easy to understand why 25 out of 26 photographers and reporters picked her out of a group of some 50 other girls, in a national contest; she is as sweet and cooperative as she is pretty.

Notes taken during her t.v., radio and personal interviews include the fact that she has won 75 swimming awards; remembers the last dress she bought was when she was in the seventh grade. She wore her first pair of high heels and the occasion was a box-social at school. (She's also an expert seamstress, and has won two Singer Sewing contests.)

The 1960 Maid of Cotton is a girl of boundless energy (for a while, the tour manager and the tour secretary had to take turns accompanying her sightseeing after the day's work was done . . . and in Atlanta, after a full day of being Maid of Cotton, Sandra climbed to the top of Stone Mountain, while her traveling companions waited, seated and pooped out, for her descent.)

Seeing the World

While in Dallas, Sandra was just on the first part of her world-wide tour. She

THANK-YOU NOTES to write, with some of her 16 suitcases.

A LITTLE TIME for sight-seeing. Libby Clark, tour manager; the Maid, and Mary Ann French, tour secretary (from left). Dallas Cotton Exchange in background.

THE style show in Titche's tea-room for McCall's patterns.

TWINS, June (left) and Jane Wyche wanted help with their wardrobe selection, and most of all wanted really to meet the Maid of Cotton.

was off for Houston the next day, and then on to appear in some 30 American cities all together, and three in Canada. Then on June 1, she will be on her way to Europe and will visit England, France, Italy, Belgium, Spain and Greece. Upon her return she will be presented with the entire wardrobe designed especially for her, 22 pieces of cotton-coated Amelia Earhart luggage, and a 1960 Ford of her choice by the Memphis District Ford Dealers. That's quite a prize.

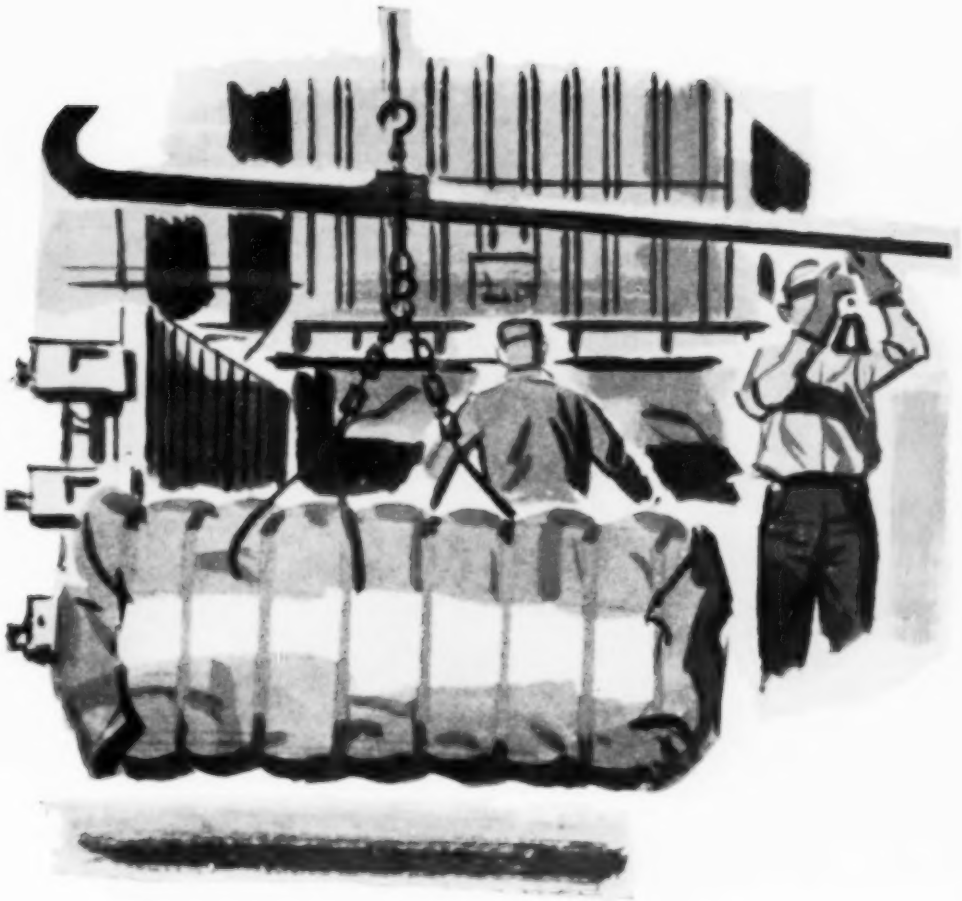
But Sandra deserves this wonderful prize. She is as unassuming and as co-operative as is possible. In Dallas, they asked if she would mind appearing on a Saturday for the teen-age tea and style show, a day she is not expected to make appearances, and of course, the answer was "yes."

Sandra is a wonderful representative for cotton—and cotton is lucky to have her.

Any girl born in a cotton-producing state, aged 19 to 25, who has never been married, is at least five feet, five inches tall, is eligible, and can obtain additional information from the National Cotton Council, P. O. Box 9905, Memphis 12, Tenn., about the contest to select the 1961 Maid, which opens in September.

THE end of the day, two versions . . . . but just one vision.

WELL, we've seen your job—now this is where we work, and this is how The Press is printed, and this is one of our pressmen, Red Simpson.



RESPONSIBILITY — Today more than ever it is imperative that ginners preserve the quality of the lint that growers entrust to their care.

ANDERSON, CLAYTON & CO.

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ATLANTA · NEW ORLEANS · NEW YORK · BOSTON

• West Coast Meeting Of Superintendents

THE WEST COAST DIVISION of the International Oil Mill Superintendents Association held its annual meeting in the Sierra Room of the Statler Hilton Hotel in Los Angeles, March 18-19.

Among the featured speakers and their topics were: Richard P. Beedle, president, George W. Gooch Labs, Ltd., Los Angeles, "Independent Laboratory-Guide and Guardian;" Richard A. Phelps, assistant research director, National Cottonseed Products Association, Dallas, "Present Status of Cottonseed Products Research;" John Algeo, consulting nutritionist, Santa Maria, Calif., "Recent Developments in Feed Technology;" Dale Dybbro, general manager, Pacific Vegetable Oil Products Corp., Los Angeles, "Oil Bleaching;" C. H. VanMarter, fire protection engineer, Union Oil Co., Los Angeles, "Plant Fire Protection," and C. M. Schillmoller, corrosion engineer, International Nickel Co., Los Angeles, "Corrosion Resistant Materials."

Several panel discussions also were held.

• **Entertainment** — Entertainment features were arranged for those attending the convention, as well as for the wives. A buffet supper was given with entertainment Friday evening in the Golden State Room. Saturday the ladies toured Knotts Berry Farm where luncheon was served. Saturday evening, a cocktail party preceded the annual banquet and dance in the Pacific Ballroom.

Arrangements for this meeting were handled by the following committee chairmen, assisted by members of their committees: E. D. Garner, Chowchilla, general chairman, meeting; Sidney Switzer, Shafter, registration; Clyde Warner, Corcoran, membership; Leo Martinusen, Montebello, entertainment; and Harold Crossno, Los Angeles, welcoming. Mrs. E. D. Hudson, Fresno, arranged events for the Ladies Auxiliary.

Orville Williams, Abilene, Texas, has served as president of the International group during the past year, assisted by O. L. White, Taylor, Texas, vice-president; H. E. Wilson, Wharton, Texas, secretary-treasurer, and A. Cecil Wamble, College Station, assistant secretary-treasurer.

The board of directors includes, G. A. Ward, Phoenix; K. B. Smith, Fresno; O. J. Jones, Abilene, and W. S. Switzer, Shafter. State vice-presidents are Dewey Pickett, Litchfield Park, Ariz.; H. F. Crossno, Los Angeles, Calif.; R. L. Barnes, Roswell, N.M., and S. F. Rojas, Gomez Palacio, Mexico.

Wayne Griggs Is President Of Tennessee Council

J. Wayne Griggs of Humboldt has been elected president of the Tennessee Agricultural Council at a board of directors meeting in Memphis early in March.

As a ginner and farmer, Griggs serves on the board of directors of the Tennessee Cotton Ginners' Association. A graduate of the University of Tennessee, his other business interests include a general merchandise store operation in Crockett and Madison Counties. He is a member of the Crockett County Court and the Crockett County Purchasing Committee.

Elected vice-presidents during the meeting were Allen Robertson of Ridgely, C. Wilson Vinr of Ripley, Allen Fail of Jackson, and Paul Barrett, Jr., of Millington.

G. F. Parker of Tiptonville was elected treasurer, and John W. Wilder of Mason, immediate past president, chairman of the board of directors.

Texas Cotton Association Holds Annual Meeting

The Texas Cotton Association held its annual meeting, March 18-19, at the Sheraton Hotel in Dallas, with committee meetings held March 17.

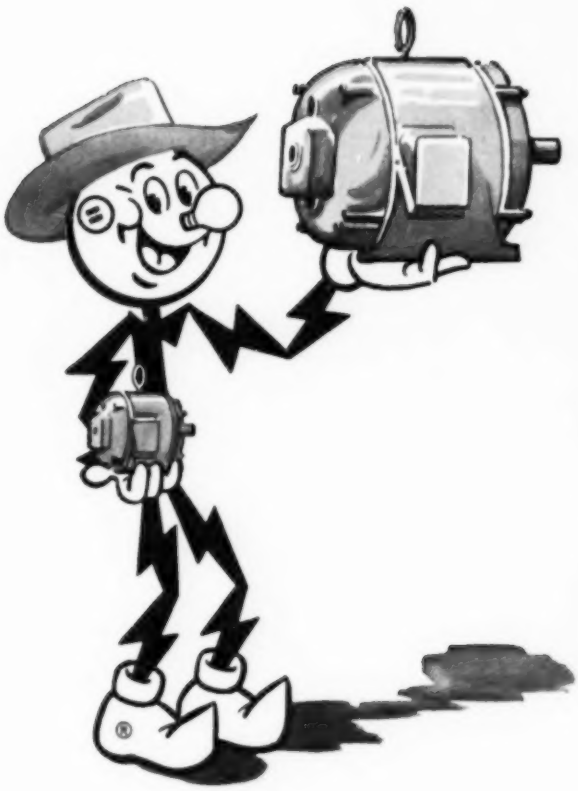
Featured speaker for the meeting was William S. DuBois, vice-president of the Chase Manhattan Bank in New York City, who addressed the group Friday morning.

The convention opened officially at 9:30 a.m. in the South Ballroom with A. Starke Taylor, Jr., Dallas, president, presiding. That afternoon a business session was held at 2 p.m. in the South Ballroom.

Firm Announces Buying Plans

Spartan Grain and Mill Co. expects to use about 600,000 bushels of soybeans this year at its new processing plant in Spartanburg, S.C. The firm points out that it can handle more beans there than at its recently-announced buying station in Newberry, which will handle a limited volume.

■ **JOAN WIENKE, Texas Tech freshman and daughter of L. L. WIENKE, ginner, is an attractive entry in the Miss Lubbock contest.**



BIG OR LITTLE NEED FOR POWER?

Perhaps you need Reddy Kilowatt for just a one horsepower job . . . or maybe you need him to power that big 500 H.P. motor load in your cotton gin . . . he's right there 24 hours every day to lend you a hand. Reddy serves you dependably whether the load is big or little . . . and he serves you economically, too. Look around your plant and see how many ways Reddy can help you modernize.

CONSULT TP&L ENGINEERS . . .

They'll be pleased to discuss any power problem concerning your business in the Company's service area . . . advising you regarding the efficient, economical use of electricity in the cotton ginning industry.

TEXAS POWER & LIGHT COMPANY

Classified Advertising

RATES AND CLOSING DATES: Ten cents per word per insertion. Include your firm name and address in making word count. Minimum charge $2.00. Copy must be in our hands by Thursday morning of week of issue. Please write plainly.

Oil Mill Equipment for Sale

FOR SALE—Filter presses, screening tanks, expellers, linters wood or steel, single and double box all-steel linter baling presses, Bauer #199 seed cleaners and separating equipment, 42" and 60" rolls, 30" to 48" bar and disc hullers, 72" and 85" stack cookers, various size filter presses, boilers, Roots blowers, hydraulic press room equipment, hull beaters, attrition mills.—V. A. Lessor & Co., P. O. Box 108, Fort Worth, Texas.

FOR SALE—French 24" x 72" jacketed cooker rings and bottoms, $500 set. Make 1-seven, 2-fours, 3-threes. French 3-stage press; 30" and 36" Bauer attrition mills; 2-14" x 42", 4-14" x 48", 4-16" x 48" rolls; automatic sacking scale; pedestal bag closing machine; 100 h.p. Scotch Marine boiler with equipment, gas fired; Helm jumbo pellet mill; Helm #4 cake breaker; Drayer feeders; permanent magnets; shafts, pulleys, conveyor, belt, many other items.—Guthrie Cotton Oil Company, Box 446, Phone BUtler 2-4400, Guthrie, Oklahoma.

FOR SALE—2 French 4-cage screw presses, 9" extension, 75 h.p. motors. French 60" rolls. Carver 141-saw linters. Bauer 199-60" seed cleaner, 198 hull beater, 153 separating unit. Butters 141-saw machines, 36" and 42" Chandler hullers. Carver 48" huller, 36" attrition mills. Motors and starters. All-steel sand and boll reel. Filter press. Roots #7-17 blower and pipe. D-K hull packer. 72" French cookers. Fort Worth lint cleaners. Exhaust fans.—Sproles & Cook Machinery Co., Inc., 159 Howell St., Dallas, Texas. Telephone RI-7-5958.

FOR SALE—Modern rebuilt Anderson Expellers. French screw presses for specific oleaginous products.—Pittock & Associates, Glen Riddle, Pa.

FOR SALE—Five-high 85" steam jacketed French Cooker in good condition.—Farmers Cotton Oil Company, Wilson, N.C. Phone KI 5-2154.

INSPECTIONS and appraisal. Dismantle and installation.—Oscar V. Shultz, Industrial Engineering. Phone BUtler 9-2172, P. O. Box 257, Grapevine, Texas.

Gin Equipment for Sale

FOR SALE—Continental DFB lint cleaner, complete with motors and sheet metal piping. Excellent condition.—Maricopa Growers Gin, Phone LOgan 8-2382, Maricopa, Arizona.

GINNERS—For any of your machinery or supply needs, from individual items to complete plants, or when you have machinery for sale or trade, contact us. Visit us at Booth No. 107 at the Texas Cotton Ginners' Convention in Dallas.—R. B. Strickland & Co., Waco, Texas.

FOR SALE—One 5-cylinder 52" Murray inclined blow-in cleaner, belt driven. First-class condition.—Seidel Bros., Brenham, Texas.

FOR SALE—3-80 saw Continental brush, all modern gin, with 2 driers, bur machine, lint cleaners, 2 Impact cleaners, Mitchell Super units, all-steel press with EJ tramper. Excellent condition.—Estate of C. E. Cloutier, Natchitoches, La.

FOR SALE—Four or Five Continental F3 gin stands with chrome fronts. Four extra saw cylinders. Very good condition.—Write or call W. D. Howard, 2312-59th St., Lubbock, Texas. Phone SW 5-2070.

All-Steel Gin Building

New Design Panels
Heavy Gauge Iron
Heavy I-Beam Trusses
and Columns

36' x 120' Double Suction Shed

Deliver and Erect
Anywhere in Texas, $14,485

MITCHELL STEEL BUILDING CO.

Phone Dallas: FL 7-6951
P.O. Box 456 Carrollton, Texas

FOR SALE—Two Continental 10' triple saw bur extractors with 14" conveyor, $750 each. Two tower driers, $200 and $500. 1-6" Roots blower, $500.—Sebastian Farmers Gin, Sebastian, Texas.

FOR SALE—Bargain—4-90 Murray safety gins with Super Mitchells and conveyor distributor.—Bill Smith, P. O. Box 694, Phones OR 4-9626 or OR 4-7847, Abilene, Texas.

FOR SALE—5-80 saw Hardwicke-Etter gins, 5-80 saw Hardwicke-Etter extractor feeder, 5-80 Hardwicke-Etter conveyor distributor, 5-80 Hardwicke-Etter lint cleaner, one Continental press and packer complete.—Crosbyton Farmers Coop Gin, Crosbyton, Texas. Joe C. Bailey, Mgr.

FOR SALE—One DFB Continental lint cleaner in excellent condition.—Box 9, The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

HARDWICKE-ETTER—All You Need to Know About Gin Machinery.

FOR SALE—One complete 3-80 automatic brush with MEF feeders, Lummus down-packing steel-bound press with EJ tramper, GM 6-cylinder diesel motor, ginned less than 9,000 bales. One complete Continental 3-80 automatic airblast with 4X feeders, Lummus steel-bound, 2-story press with EJ tramper, 75 h.p. electric motor, ginned less than 12,000 bales. To be moved or operated here.—Arvil Decker, Rt. 3, Crossville, Ala.

DISMANTLING Travis Gin. Come and see—I may have what you are looking for.—M. A. Holscher, Travis, Texas.

FOR SALE—4-80 conveyor distributor; Murray tramper; horizontal pump; conveyor seed elevator; 40" Murray fan.Geo. Grammer, Planters Co-op Gin, Box 561, Bardwell, Texas. Phones: gin—84, residence—46.

FOR SALE—4-80 Continental gin plant. All-steel building, diesel power, complete, ready to run. Also, 7 acres land with ½-acre pond. Modern 9-room home with basement. Will sell gin separate to be moved, or will sell gin, land and home, gin to be operated at present location. Very reasonable price. Write for complete information.—Arthur Christensen, 611 North Ave. H, Elgin, Texas.

FOR SALE — One 1949 Model LeRoi L-3000 engine, 400 h.p. V-12, being rebuilt to new condition—enclosed cooling system included—bargain, $6,950. One 6-cylinder LeRoi engine, 150 h.p., as is, $1,650. Five good Lummus automatic 80-saw gin stands with roll dumps and glass fronts and with good Lummus MEF feeders. Make us an offer.—Fortson Farms Gin, Phone 4-7711, Box 1321, Corsicana, Texas.

FOR SALE—1952 Model, 72" Continental square steel battery condenser. Complete with flues, Hartsell fans and motors in flues for Moss Lint Cleaner. Priced to sell.—Maurice Goodwin, East Afton Gin, Afton, Texas.

FOR SALE—One complete late model 5-80 Murray plant with Super Mitchells, Murray conveyor distributor, 24-shelf tower drier with 3M BTU heater, two 7-cylinder 70". 1955 model Hardwicke-Etter cleaners, 1954 model 14' Hardwicke-Etter right-hand bur machine with inlet and return conveyor, and full V-belt drive. Fans, electric motors and numerous other items of excellent machinery. Will sell complete or any part at attractive prices. For details and prices, contact: R. B. Strickland & Co., 13-A Hackberry St., Phone: Day or Night: PL-2-8141, Waco, Texas.

FOR SALE—Complete 4-80 Murray gin plant. 48-M gin stands, steel press, Super Mitchells, lint cleaners, one 24-shelf tower drier, one Mitchell drier, ample overhead cleaning. To be moved.—Central Cotton Oil Co., P. O. Box 221, Macon, Ga. Phone SH 3-4434.

FOR SALE—3-80 saw Continental outfit. F3 gin stands, 4-X huller cleaner feeders, droppers, separators, condenser, Paragon steel-bound press, EJ tramper, 2-trough drier, 4-cylinder incline cleaner, V-belt drive, Vertimatic Mitchell heater, 3M B.T.U.; Fairbanks-Morse seed scales, 6-cylinder GM diesel motor. Will sell all or any parts cheap.—J. O. Collins, McBean, Ga. 17 miles south of Augusta, Ga., on Highway 56.

FOR SALE TO BE MOVED—All-steel, 3-90 Cen-Tennial gin plant with Super Champ Mitchell feeders, two 24-shelf tower driers, vertimatic burner, two Murray overhead cleaners, Moss-Gordin steel, one story, down-packing press, electric power, f.o.b. gin site, located in Arkansas.—Box 18, The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

FOR SALE—Continental DFB lint cleaner, 1950 Model. Ginned 4,000 bales. Excellent condition.—Box 19, The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

FOR SALE at a bargain, to be moved—Complete 4-90 saw outfit with electric power, consisting of: 4-90 saw Murray gins, with mote bars, 66" Mitchell Super units, Continental single conveyor distributor, Continental separator, Continental trough drier, impact machine, all-steel down-packing press with tramper and vertical pump, all-steel condenser, all fans and transmissions, seed scales, seed handling system consists of Roots-Connersville hi-pressure blowing. This outfit is in excellent condition and is ready to operate. Make all inquiries to W. C. Tindel or Davis Tindel, Graceville, Fla.

SPECIAL BARGAIN—Complete 3-80 Lummus airblast outfit, equipped with Super Mitchell feeders, conveyor distributor, 4-section Mitchell Jembo, gas drying, down packing swinging door press, two electric motors. Mitchell equipment used very little. Plant closed last season due to cotton leaving this area—ginned 150 bales previous year. Terms if necessary.R. E. Evans, 527 Hawthorne Lane, Charlotte, N.C.

FOR SALE—3-80 Continental system, F3 gins, automatic feed, XX feeders, steel-bound up-packing press, lift and seed scales.—Jordan Bros., Cullman, Ala. (at Trimble).

FOR SALE—Due to my health I wish to sell my 4-80 Lummus, all-metal cotton gin with Mitchell 4-cylinder Jembo, 24-shelf tower, 1M gas heater, all-steel down-packing press and pump, three Murray lint cleaners in brick building. Also, one 2-stand Continental seed delinting plant in cement block warehouse on 1½ acres of land for $15,000 cash, or $20,000 on terms.—Grover J. King, Box 55, Swansea, S.C.

Super Jems Available

3-66" Mitchell Super Jems and aftercleaners complete with conveying equipment. Used only slightly. Good paint and excellent condition.

SAM CLEMENTS
West Memphis, Arkansas
Phone: RE 5-3744 **P. O. Box 86**

NEW BOLTED gin building, 36' x 120', double suction shed, $12,500.—Mitchell Steel Building Co., Phone Dallas: FL 7-6951, P. O. Box 456, Carrollton, Texas.

BARGAIN—Will sell all or any part. One complete all electric gin to be moved or operated as is. Located on approximately 3-acre plot in Melvin, Texas. Machinery consists of: 5 electric motors, 3-40" fans, 1 double 35" cast iron fan, 4-80 Continental gins and Mitchell feeders with drying attachment, 1 Continental auger distributor, 1-14' all-steel bur machine, one 4-cylinder Continental cleaner, 1-50" Continental dropper, 1-72" down-draft condenser with practically new lint flue, steel-bound press, complete with pump and tramper, one set seed scales and rotor lift, two sets truck scales and office building. 100-bale capacity cotton house, seed house and other out buildings. This gin is ready to run. Reason for selling have other business.—W. R. Shipp, Box 448, San Saba, Texas. Telephone 224J.

FOR SALE—One 4-80 saw diesel powered Gullett gin, complete, including building . . . contact Brady at Helena Cotton Oil Company, Inc., Helena, Arkansas.

FOR SALE — 1958 Hardwicke-Etter Lintmaster, two Lummus lint combers, one with grid bars and slat type feed. One all-steel double box up-packing Murray press. One 38" and one 50" Hardwicke-Etter separators. STEEL CLEANERS: 5- and 7-cylinder Murray blow-ins with V-drive, 2-50" and 1-72" Continental inclines, 5- and 6-cylinder Hardwicke-Etter and two 4-cylinder Gullett blow-ins, 6-cylinder Stacy, two Thermos, 48" Cen-Tennial airline and 96" Lummus. Three 10' Lummus center feed bur machines, one with built-in 3-cylinder after cleaner. 3-90 saw Hardwicke-Etter and 4-90 saw Continental conveyor distributors. Continental vertical and Murray horizontal press pumps. Two batteries of 4-80 saw glass front Murray gins with Super Mitchells, complete with lint flue and couplings. New tower driers, Mitchell and Service Gin Company heaters. New flat and V-belting and a general line of conveyor and transmission equipment. For your largest, oldest and most reliable source of used and reconditioned gin machinery, contact us. Call us regarding any machinery or complete gin plants which you have for sale or trade.—R. B. Strickland & Co., 13-A Hackberry St., Phone: Day or Night: PL-2-8141, Waco, Texas.

FOR SALE—Completely modern gin plant. 4-90 Continentals, double lint cleaning and overheat cleaning and drying. Truck and trailer included. A year-round business., no rebates, ginned over 3,000 bales in 1959.—Box 43, The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

FOR SALE—One D13000 Caterpillar diesel engine with sheaves and V-belts, in perfect running condition, $1,500. 5-60" special Super Unit Mitchells—the upper sections will fit on any standard Mitchell—$150 each. 5-70 saw Continental aluminum brushes, $50 each. One Murray 2-cylinder vertical pump with large pistons, $150. One 8⅝" ram and casing 11' long, $100. 1-9" Southwestern rotor lift, 28' long, $175. One set of 15" I-Beams for Continental Paragon Press, full length with upright channel and center post, $150. One set double hopper Fairbanks seed scales, $175. Call UN 3-3114, Georgetown, Texas. C. J. or C. G. Doering or contact during convention at the Adolphus Hotel.

FOR SALE—GINS: Five F3 Continental brush, 5-90 Cen-Tennial, 5-80 Hardwicke-Etter, 12-80 Murray, 4-80 double moting Lummus, 4-80 all-steel Lummus, 5-80 Continental Model C brush, 5-80 Continental Model C airblast, 5-90 Gullett, 1-90 Hardwicke-Etter, 1-90 Lummus, 4-70 Continental F3 brush. FEEDERS: 4-70 Continental XX, 9-66" Super Mitchells, 10-60" Super Mitchells, 5-66" Hardwicke-Etter with 4-cylinder aftercleaners, 5-66" Continental 4X, 8-66" Master Continental XX. BATTERY TYPE LINT CLEANERS: One Moss Constellation, 4 Lummus Combers, 1 Hardwicke-Etter Lintmaster. INDIVIDUAL LINT CLEANERS: 6 Lummus Jets, 5-80 Murray ABC Jets complete, 12-80 or 90 Murrays, 5-80 or 90 Hardwicke-Etter. BUR MACHINES: 2-10' Hardwicke-Etters with steel platform and supports, 1-14' late model Murray, 1-10' Lummus with 5-cylinder built-in aftercleaner, 1-14' Stacy, 2-10' Wichitas, 1-66" 6-cylinder Mitchell Jembo. CLEANERS: One 7-cylinder V-drive 70" Hardwicke-Etter blow-in, one 9-cylinder V-drive 70" Hardwicke-Etter, one 7-cylinder V-drive 72" Murray, 2-96" 6-cylinder grid bar Lummus with Green Leaf & Stick Remover on back, 1-50" 6-cylinder Gullett incline blow-in type, 1-48" 6-cylinder Lummus horizontal, one 6-cylinder 66" Mitchell Jembo, one 6-cylinder Hardwicke-Etter airline, 1 Continental 6-cylinder airline, one 4-cylinder Murray airline. PRESSES: 1 Continental all-steel short box down-packing. TRAMPERS: 1 Lummus long stroke, 1 Hardwicke-Etter long stroke. CONDENSERS: 1-72" Murray down discharge, 2-72" Continental side discharge, 1-60" Continental side discharge, 1-60" Lummus down discharge, 1-48" Continental side discharge. PRESS PUMPS: 2 Murray upright automatic oilers, 1 Murray horizontal, 2 Alamos. SEPARATORS: 1-50" Continental, 1-50" Murray, 1-50" Gullett. CONVEYOR DISTRIBUTORS: 5-80 or 90 Hardwicke-Etter with short bypass conveyor and bale hoppers, two 5-80 Murrays, 4-80 Lummus. MISCELLANEOUS: 1 Roots-Connersville seed blower, rotor lifts, vacuums, fans, electric motors, seed scales, 1-25 h.p. boiler with automatic burner. BURNERS: 1 Hardwicke-Etter 1½M burner, 1 Hardwicke-Etter 3M burner.—Bill Smith, P. O. Box 694, Phones OR 4-9626 or OR 4-7847, Abilene, Texas.

FOR SALE—All-steel 3-80 Continental gin plant. Equipped with 4X extractors, 4-trough overhead drier, all-steel down-packing press, inclined cleaner and bur machine. Write Ira T. Cousins, Newberry, South Carolina.

GINS—5-90 saw Cen-Tennial, 4-80 saw Murray (late model), 4-80 saw Lummus double moting. FEEDERS: 5-66" Super Mitchell, 4-60" Super Mitchell, 4-67" Continental Master double X. CONDENSERS: One 72" square up-draft Continental. Various size fans and rebuilt blast wheels. Extra saw cylinders for 80 and 90 saw Continental and Murray stands.—Kimbell Used Gin Machinery Co., Box 456, Phone 3372 or 3351, Earth, Texas.

FOR SALE—Single-box, all-steel, down-packing, Continental Model E, baling press in excellent condition. Box size 24" by 48".—Buckeye Cellulose Corp., P. O. Box 6757, Memphis 8, Tennessee.

COTTON GINS—Have good gin, Pecos, Texas, irrigation, steel machinery, $30,000, $12,000 cash. 5-80 Continental, 200 h.p. motor, steel machinery, Corpus Christi, $60,000, $20,000 cash. 4-90 Continental, electric, steel machinery, irrigation, $60,000, $20,000 cash. 5-80 F3 Continental, electric, steel, part irrigation, $125,000, $30,000 cash. 5-80 Lummus, MM motor, natural gas, steel, irrigation, $90,000, $30,000 cash. 5-90 Murray, electric, steel irrigation, one of the best, $190,000, carry good loan. Have several other good gins located over South Plains area.—W. T. Raylon, Box 41, Lubbock, Texas. POrter 2-1605.

FOR SALE—Cotton gin on Georgia No. 83, about 8 miles from Madison, standing on lot of approximately one acre. 3-80 saw Murray gins, new lint cleaner, 3 new Huckle extractors, both lint cleaner and extractors used very little; and will sell with lot on which it stands, or gin buildings, machinery, and all equipment for removal from premises; subject prior sale.—Call or write Mrs. Ovella A. Nolan, Bostwick, Georgia.

PRESS BARGAIN—All-steel up-packing Continental complete with power, back-geared V-belt drive pump, base tank and cover, EJ tramper. In excellent condition. Any reasonable offer will be considered.—James C. Mann, Phone 4931, Conyers, Georgia.

FOR SALE—One 24-shelf, 2-section cotton drier tower, complete with oil fired heater unit. Excellent condition.—A. B. Johnson, Johnson Cotton Co., Dunn, N.C.

FOR SALE BY OWNER—4-90 Lummus gin stands with Jets, flue and condenser, 4-66" Super Mitchells, Continental conveyor distributor, 17-shelf Continental tower drier, 72" Impact cleaner, one Lummus horizontal hot air cleaner, 1-10' Continental bur machine, Lummus "A" lint comber, up-packing steel press, one Lummus and one double hopper seed scales, 2-195 Lummus fans, 2-45" Phelps fans, 2 rotor lifts. Electric motors, all 440s with starters: 1-125 h.p., 1-100 h.p., 1-60 h.p., 2-30 h.p., 2-15 h.p., 2-10 h.p.—T. J. Kmiec, Chapel Hill, Texas.

Equipment Wanted

WANTED—Two used 10' steel Hardwicke-Etter bur machines, righthand and lefthand.—H. J. Kasberg Gin, Box 275, Miles, Texas.

WANTED—Late model 5-90 Murray gins, also 5-66" Mitchell Super Champs. State year model, condition and price in first letter.—Box AB, The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

WANTED—1-60" Standard Mitchell feeder, 4-66" Mitchell 7-saw Super Champ, 4-66" Mitchell Super Units, 4-14" wire-wrapped Cleanmaster Moss-Gordin lint cleaners.—Box 6, The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

WANTED—Used 36" Vane Axial or Hartzell type fans, less motor. State condition, age and price in reply.—Box 66,The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26, Texas.

Personnel Ads

WANTED — Several experienced gin machinery draftsmen for immediate employment.—Contact R. M. Shelburne, Hardwicke-Etter Co., Sherman, Texas.

WANTED—10 years experience, ginner and foreman, desires change. Year around job. Call or write F. J. Provance, 106 Vanmenter, Kennett, Mo. Phone TUxedo 8-3952.

WANTED—Working interest in gin. Age 45. 27 seasons experience. Would consider moving plant. —J. R. Heard, 5103, 39th St., Lubbock, Texas. Phone SW 9-4436.

Power Units and Miscellaneous

SALES—Service—Repair—Installation—All makes of scales. Used scales taken on consignment. Large stock of used motor truck and railroad track scales.—Industrial Scale and Equipment Co., Phone OR 2-8336, 7014 Force St., Houston, Texas.

PEDIGREED COTTONSEED
State Certified LANKART 57
State Registered MEBANE & ROWDEN
MALONE BROS.
Wills Point, Texas
(State Registered Plant Breeders)

FOR SALE—Nationally advertised business—Used in cotton gins, cottonseed oil mills, delinting plants and spinning mills. Complete factory equipment, all merchandise with seventy units ready for delivery, including patent. A fast growing and profitable business.—Waller Bale Gage, P. O. Box 761, Big Spring, Texas.

FOR SALE—Fairbanks-Morse engine, 150 h.p., 300 rpm, Model 32E, 14 x 17 full diesel, used nine seasons. Good buy. Call J. L. Phillips, Mgr., Farmers Co-op Gin Ass'n., Princeton, Texas. Phone RE 6-2422.

SCALES FOR SALE: Authorized Fairbanks, Morse scale dealer. New and used scales. Guaranteed service anywhere, anytime—Lewis Scale Service, Clarence E. Lewis, 616 Avenue A, Lubbock, Texas. Phone PO 3-4271 or SH 7-1857.

GUY B. LAWHON
Industrial Appraiser
Following the methods and ethics of the late Thos. C. Neisler.
6138 Vickery Blvd. Phone:
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Western Conference

(Continued from Page 28)

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Ginning That Will Satisfy the Requirements of Producers and Mill Customers

RAY PROVOST
Vice-President, Producers' Cotton Oil Co., Fresno

Most industry people, including mill operators, are reasonably certain that changes in cotton fiber characteristics cannot be attributed solely to mechanical changes at gins.

Changes in fiber characteristics through seed breeding, cultural practices, broadening use of chemicals, harvesting, and the attendant need for increased cleaning of seed cotton in the gin are all playing a part in the changes in spinning performance. Technology has not stood still in mills. They have made progress toward higher efficiency, and this inevitably creates problems in mill performance.

A significant portion of our problems find their genesis in an antiquated method of cotton quality evaluation. Our industry's progress in this field has not matched that on the farm, gin and mill. Consequently, the ginner is faced with a rapidly widening difference between producer and mill requirements.

• **Ginner Is on the Spot** — The economic health of the ginner is in the hands of the cotton farmer. His first responsibility must be to his producer customer. To meet producer requirements, the ginner must package a bale of cotton that will promise the greatest return to that customer in the market place.

The dominating element in the market place for American cotton is government. We must recognize that government purchases, or loans, are tied to a system of quality evaluation that is rapidly deteriorating in usefulness in determining manufacturing performance. There is no alternate method of quality evaluation for government to use in its price support program. The ginner, therefore, finds himself in the position of attempting to establish quality standards to obtain the highest return for the producer from government and, in so doing, he may destroy the finest fiber characteristics in his customer's cotton. The mill customer has found it increasingly difficult to compete with government on a day-to-day basis in the market place and has placed his greatest reliance on government stocks for his supplies. Under those conditions the mill customer has had scant opportunity to improve quality standards through incentive prices.

The ginner is the first processor of our cotton. Therefore, he is, in part, liaison between mills and producers. He has the same responsibility other cotton industry segments have, perhaps more so, since he is closer to the producer than any other element in our industry, and can be of immeasurable value in presenting information of interest and benefit to the farmer. Much rapid progress in production mechanization can be attributed to the close relationship between producer and ginner.

Many ginning tests have been made in the last few years and efforts made to correlate ginning practices with manufacturing performance. I believe most of the tests can be summarized in the words of a Mid-South ginner: "One significant fact stands out very clearly in most of the tests that have been made. Under extreme operating conditions every piece of machinery in a cotton gin can and will damage our cotton fiber. Few ginners are extremist in their operations. I cannot help but feel too much emphasis has been put on the negative side of cotton ginning."

Perhaps this ginner is right. However, ginning equipment can and will damage fiber. Overdrying, for instance, has been a problem for some years. Some progress has been made in educating the farmer and ginner on the damage inherent in this practice, and we can expect further improvement if the educational program on cotton quality preservation is continued.

• **Instruments Needed** — Fiber damage from specific ginning equipment is very difficult to pinpoint. We cannot say that available research data prove conclusively to the majority of our ginners and spinners that certain types of ginning machinery are damaging to the manufacturing performance of our fiber. The lack of conclusive data in this field is due solely to the lack of research facilities and an organization which has the resources to provide quick and positive answers. For the most part, we do not have adequate measuring instruments for sound cotton quality evaluation. Instrumentation is a crying need of our industry.

However, we should beware of a tendency to ignore the complaints of some of our mill customers that some ginning practices are damaging to our fiber. A continuing warning from some of our customers must have a foundation of justifiable complaint. I cannot accept, nor do I believe, that these complaints are based on purely selfish motives.

The equipment we are using was designed by thoroughly capable and experienced engineers. Their objective, in most cases, is to clean cotton in such a fashion as to produce the best possible grade as dictated by American Cotton Standards. There is no other standard of value to guide them. There has been little opportunity for the cotton gin manufacturer to associate machinery design with cotton fiber manufacturing performance.

Further, we must not overlook the tendency of some cotton gin operators to operate or modify their machinery to their own specification. Pulley speeds, individually and in combination, will often produce unexpected results in the end product which are not visible to anyone until the cotton enters the mill door. Multiple machinery installations, often rereferred to as elaborately equipped gins may, with some combinations of machinery, seriously damage our fiber.

The most logical ginning rule to guide cotton gin operators is that of maintaining a vigilant eye on the condition of the cotton that has to be processed daily. We must maintain a level of moisture in our lint cotton some place between five or six percent. This will guard against excessive drying of seed cotton. Keep in mind also the use of multiple cleaning equipment on cotton that requires very little cleaning. The best and most effective practice is to constantly impress the farmer with the need to preserve desirable spinning quality by constant effort to improve harvesting practices.

A considerable volume of our cotton was purchased last season on the basis of the ginner by-passing some specific ginning machinery. The volume reached such proportions that it removed all doubts as to the sincerity of the objections of some mills to the use of certain types of cleaning equipment. The term "custom ginning" is becoming common in California cotton circles. This is an effort on the part of some mills to obtain spinning qualities which are inherent in our cotton by paying a premium to eliminate the use of specific ginning equipment. The mill customer is not certain that he will obtain the desired spinning qualities, but he has demonstrated his willingness to pay for his convictions that certain ginning practices are damaging to our cotton fiber.

The cotton industry can ill afford such loose quality marketing standards. Competition demands that our industry develop marketing standards more exacting and more truly representative of the manufacturing performance of our cotton. We must take the iniative in the preservation of our cotton quality. We cannot expect the mill customer to pay for unknown qualities of fiber when known qualities are available to him from the synthetic manufacturers.

We all are very much impressed with the progressive spirit of the American cotton industry. I would like to point out, however, that the theory of the atom was developed and in most part accepted by the Greeks over two thousands years ago. It has been a scant 50 years since the world began the development of instruments that made possible the practical realization of a source of energy beyond the fondest dreams of mankind. I might add this development gained tremendous impetus because of the demands of a devastating war.

We pride ourselves on the intelligence and aggressive spirit of the American cotton industry. It is to be hoped that it will not attempt to survive a 50-year lag in the development of marketing standards that will truly reflect the manufacturing performance of our cotton fiber.

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Results—Implications of the 1959 Gin Moisture Survey

EDWARD H. BUSH
Executive Vice-President, Texas Cotton Ginners' Association, Dallas

For many years the problem of preserving the inherent fiber quality of cotton at the gin has been of prime consideration. I am here to discuss with you one of the efforts in Texas to find out—if possible—how we can preserve cotton quality at the gin.

In 1954, at Clinton, S.C., spinners were hosts to ginners in what is now known as the Ginner-Spinner Meeting. Spinners placed officially before the ginners' group their indictment which has been heard

many times since—"ginners are drying and cleaning cotton to excess."

Ginners asked, "If this situation is so serious, just how much cotton is being damaged? If you are so sure that ginners are damaging cotton, why don't you either refrain from buying this cotton, or penalize it severely in your pricing structure?"

Spinners did not have the answers to these questions. They still do not. It is impossible for spinners to identify all fiber damage until the cotton gets in a blend and on the spinning frame. Ginners then made the obvious reply to spinners: "When you find a way to identify fiber damage, and penalize this damage heavily enough in your purchases, ginners will correct overdrying and overcleaning immediately."

The problem, of course, has been that spinners have no way to place a price tag on fiber damage. As a result, in subsequent years, research work at the U.S. Cotton Ginning Laboratories and by spinner groups, encouraged and coordinated by the National Cotton Council, has continued to point up the need to identify fiber damage in the market place and to find ways of preventing or reducing damage in the gin.

At a meeting of state and federal Extension cotton and cotton ginning specialists, with research personnel from U.S. Cotton Ginning Laboratories, the following recommendations were made as a guide for ginners. These recommendations were based on research done over many years at the Cotton Ginning Laboratories and reaffirmed time and time again. They were: Ginners should use only enough drying to result in smooth ginning—for most cottons, the moisture content of the lint cotton should be between five percent and seven percent for optimum ginning and cleaning.

These recommendations were based on the following facts:

1. Cotton cleaning efficiency improves as the moisture content goes down.

2. Cotton gins best at around six and one-half percent to seven percent lint moisture content.

3. No appreciable or excessive fiber damage is done in processing, if the moisture content is held to within the five to seven percent limit.

4. Mechanical handling of any type will do some fiber damage. This damage is of a cumulative nature.

5. Excessive fiber damage will likely occur when the moisture content of the lint goes below five percent.

While we have not had any way of determining the extent of our problem, nor the areas where overcleaning and overdrying were occurring, reasonably reliable moisture testing instruments have been developed. With them it became apparent that we had a tool which we might use to determine what was happening.

As a result of these developments Texas Cotton Ginners' Association requested the Texas Cotton Research Committee to instigate a study which would determine, if possible, the moisture content of cotton presently being ginned in Texas gins. Based, then, on prior research and the assumption that cotton ginned between five percent and seven percent moisture was relatively undamaged, we would be able to determine the extent of the ginners' problem.

• **Study Carefully Conducted**—Carl Cox, director of the Texas Cotton Research Committee, enlisted the aid of Dr. Stockton, head of the University of Texas Bureau of Business Research and Statistical Section to design the statistical sampling upon which the survey would be based.

THREE COTTON LEADERS are show as they boarded the bus at the Conference headquarters for the field trip to the Shafter Experiment Station. Left to right are Harold L. Pomeroy, president, California Planting Cotton Seed Distributors, Bakersfield; Rex Colwick, USDA regional cotton mechanization research coordinator, State College, Miss.; and John P. Elting, director of research laboratories, The Kendall Co., Paw Creek, N.C.

Cox also enlisted the aid of technical people on the Council staff, and the U.S. Cotton Ginning Research Laboratories to help design the project.

It started in the Texas Lower Rio Grande Valley at the beginning of the 1959 season, and followed the harvest throughout the state. It ended on the High Plains of Texas in late December.

Every possible effort was made to randomize the sampling. Samples were checked around the clock, and at no statistical gin at the same time of day. Four samples were taken: One from the wagon under the suction; one on the feeder apron; one from the lint slide before any moisture restorative device; and one from the press box. Temperature, humidity and wind conditions were recorded at every gin location on the day that samples were taken.

Instruments were calibrated regularly to check their accuracy, and samples were taken so that oven moisture checks could be made to prove the accuracy of the moisture testing instruments used in the sampling procedures. When excessively low (below four percent lint moisture), or excessively high (above eight percent lint moisture) bales were found, 50 pounds samples were taken—from which spinning tests are being run.

I am sorry that all of these tests are not finished, however, a few of them are. Obviously, until all are done, we cannot draw any concrete conclusions.

I am not here to draw definite conclusions. Obviously, the data from this study has not been completed nor has it been properly analyzed. The information we have obtained, however, has been very interesting and may reveal some very serious problems in gin processing and producer handling in certain areas.

Percent Ginned at Designated Moisture Levels (State Average)

Moisture Content	Samples Taken at: Wagon	Feeder Apron	Lint Slide	Press Box
	%	%	%	%
4.0 and below	1.8	9.0	12.5	14.9
4.1 - 5.0	4.3	21.9	17.4	14.5
5.1 - 6.0	9.5	32.3	34.5	35.7
6.1 - 7.0	10.8	18.1	21.2	22.0
7.1 - 8.0	10.6	10.9	11.8	10.2
8.1 - 9.0	18.7	5.1	2.2	2.3
9.1 - 10.0	21.1	2.3	0.6	0.3
10.1 - 11.0	12.6	0.3		0.1
11.1 - 12.0	9.6	0.1		
12.1 and above	1.0			
Total	100.0	100.0	100.0	100.0

While these data are not conclusive in any manner, they do present a basis for further study. The implications to be gained here, I believe, are: There is a serious quality problem evident; there is some overcleaning and overdrying being done; overcleaning and overdrying at the gin is of a greater magnitude than anyone in the ginning industry has suspected.

We believe next year's study, on an expanded scale, will give us a broader base upon which to reach conclusions. At the end of the study next year, we will be in a position to begin an accelerated educational program aimed at eliminating overdrying and overcleaning in Texas gins.

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■ **CLEMENT DUNCAN, Southern Cotton Oil Mill, and R. E. WELLS, Decatur Cotton Oil Mill, have been active in urging farmers to plant or release cotton acreage around Decatur, Ala.**

Fertilizing Cotton For Optimum Results

RICHARD B. BAHME
Western Regional Director, National Plant Food Institute, San Francisco

Cotton growers are constantly searching for the combination of conditions that produces the best average result. Let's analyze briefly factors over which cotton producers have a choice and some control.

Certainly climate is important and growers generally locate in areas favorable to cotton production. Choice of seed is generally determined by performance testing to obtain the variety best adapted to a given set of production practices for a growing area.

Irrigation, seedbed preparation, planting rate, insect, disease and weed control, and soil fertility are the major factors which may be modified by the grower in producing his crop. Seed, water, sunlight and soil requirements must be met. Soil condition is one of the most important production factors over which a grower has a great deal of control. High and profitable yields of high-quality cotton require soils with good tilth and high fertility. Good soil structure promotes fertilizer efficiency and high soil fertility improves water use.

Specific fertilization programs must be developed, field by field, based on in-

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terpretation of local information, such as past practices and crops, soil and plant tests, water quantity and quality, and production goals. We shall approach the full yield potential when we have perfected our knowledge of cotton's physiological requirements and have improved our techniques for determining the nutritional status of the soil and crop. When we have fully exploited the nutritional factor for our presently-grown varieties we hope to have plants with even greater productivity.

• **Economics of Fertilization**—We should consider the economics of cotton production in the general framework of the over-all agricultural picture. While realized gross income of farm operation has been falling, production expenses have increased, yielding a lower net income. Farmers are turning to yield-increasing practices to maintain and increase net profits. Yields per acre have increased 52 percent the past 10 years.

Fertilizer has played an important part in this increase and represents one of the best buys among the major production inputs, according to the USDA. It accounts for only three to five percent of the total production inputs over the past 10 years. Fertilizer usage has climbed steadily to 2,100,000 tons in California in 1957, as compared to a leveling off at 22,400,000 tons in the U.S. Use of both commercial fertilizers and agricultural minerals has increased steadily in California. A tabulation of the leading California counties in purchases of fertilizer in 1954 shows a remarkable similarity to the list of top counties in value of agricultural production.

In 1954 California used 30,351 tons of nitrogen, 6,101 tons of phosphate, and 214 tons of potash on about 746,000 acres of cotton. This is an average of 80 pounds of nitrogen, 16 pounds of phosphate, and 6 pounds of potash per acre. The two-bale-per-acre average produced in California in 1954 removed about 130 pounds on nitrogen, 50 pounds of phosphate and 100 pounds of potash per acre. This high rate of depletion has resulted in deficiencies of essential plant foods for optimum yields, and has accelerated use of nutrients to achieve higher production and profit. Present average rates are estimated at 150 to 200 pounds of nitrogen, 60 to 80 pounds of phosphate, and on certain sandy soils, 100 pounds of potash per acre. Cotton growers have recognized that production costs are about equal for a one- to four-bale crop, and that proper fertilization will generally increase their yields and profits.

• **Water Use** — Western farmers profit most from fertilizer when it is combined with good water use. Water costs are generally higher than fertilizer costs. As water costs get higher, many growers will find additional profit from extra dollars spent for fertilizer to insure the greatest return from irrigation. New research will provide information on optimum planting rate, irrigation and fertilization for maximum profits. Each grower tries to determine the best combination of nutrients, considering his production practices, to arrive at the point of diminishing returns. This is no easy task, but official agricultural technicians and fertilizer industry fieldmen will help.

Here are some data from the booklet "Arizona Farmers Profit from Fertilizer." The breakeven point ranges between three-fourths and one and one-fourth bales per acre, depending on the specific operation. According to careful estimates, proper fertilization reduces the costs of producing Upland cotton in Arizona from $140 per bale to $96 per bale. Thirty-seven dollars worth of fertilizer, containing 200 pounds of nitrogen and 50 pounds of phosphate, yielded two and one-half bales and produced $139 extra profit per acre compared to unfertilized.

In Kern County, Calif., with cotton at 39 cents per pound, $15 worth of the right kind of fertilizer increased net return $122 per acre.

On loamy soils in Tulare County, Calif., last year some growers probed top profits, pushing the yield limit, and averaged about three and one-fourth bales per acre. They pocketed an extra $129.59 per acre. The fertilizer program which produced these results was a January preplant application of 60 pounds of nitrogen and 60 pounds of phosphate; a sidedressing in May with 100 pounds of nitrogen and 50 pounds of phosphate; and followed in June with 60 pounds of nitrogen in the irrigation water.

There appears to be a growing trend toward controlled feeding of cotton, coordinated with irrigation and other practices, to furnish the needed nutrient at the right stage of growth to achieve a heavy stand, good vegetative growth, maximum square production, high boll set and development, and higher yields.

These data are just guideposts and must be adapted to each operation. The challenge is to combine skillfully fertilization with all other management practices to realize greatest benefits. This serves notice on plant breeders to expand yield potential horizons.

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Problems and Progress In Weed Control

JOHN H. MILLER
Agronomist, USDA, U.S. Cotton Field Station, Shafter

Today's weed problems are not very different from those of many years ago. Most weeds that plague Western irrigated cotton have been problems for years. Among the annual weeds are the annual grasses, pigweed, annual morning glory, purslane, and puncture vine. Foremost among perennial weeds are Johnsongrass, Bermuda grass, nutgrass, field bindweed, and Russian knapweed. Annual morning glory and nutgrass probably are increasing in California cotton at a more alarming rate than other weeds.

Despite the search of industry and public research agencies for better herbicides, hoe labor is still a major means of weed control in irrigated cotton. The shortage of hand labor, coupled with increased labor costs, creates a problem that most likely must be solved through mechanized weed control methods.

Progress

Progress in weed control can be divided into two categories: (1) Improved practices being recommended to growers; (2) promising practices being studied that have not been developed sufficiently for growers use.

• **Improved Practices Recommended** — Research conducted for many years has shown that flame cultivation, when properly used, is an economical and effective means of weed control. Yet, flame cultivation has not been widely accepted by growers. At present, probably less than 200 units are being used in California. Certain factors deter the acceptance of flame cultivation. (1) Reluctance of many tractor operators to use the equipment because of heat and fear of LP gas; (2) lack of uniform emergence of cotton because of soil and moisture variables; and (3) improper adjustment of equipment and poor timing of operations resulting in poor weed control or damage to cotton.

Direct herbicidal oil sprays have been thoroughly tested and found effective for control of annual weeds. However, oils require precise adjustment of equipment, and the operation is slow and tedious. It also requires special land preparation and careful timing.

Monuron and diuron have proved effective for control of annual weeds after layby. Each year these herbicides are being more widely used. Problems are also encountered on soils which shrink and crack on drying since weeds emerge from the cracks; (2) herbicides have failed to control weeds when cotton beds were not completely wet by irrigation after treatment; (3) application of herbicides to improperly shaped beds has resulted in poor coverage or erosion of treated soil; (4) on certain very heavy, high-organic soils, recommended rates may not be adequate to provide good control.

Spot treatment with dalapon for control of Johnson- and Bermuda grasses in cotton is being successfully used on more acres each year. Probably the greatest problem with use of spot treatment is judging the population of perennial grass in cotton that may be safely treated. Excessive damage to cotton will be encountered if areas having large infestations of perennial grasses are treated with the herbicide.

• **Promising Practices Studied**—The environment of California and Arizona at cotton planting time is not well-suited to use of herbicides as surface-applied preemergence treatments. This is the time when the short supply of labor and increased hourly wages are most keenly felt. Much current research in California is being directed toward improved practices for early-season weed control, including several approaches to the problem.

• PRE-PLANTING HERBICIDAL TREATMENTS: The search for a herbicide which could be economically applied on large acreages some time before planting to kill weed seeds but leave the soil safe for cotton has not been fruitful. However, the promising results obtained with endothal in sugar beets and in potatoes encourage the search.

• PRE-EMERGENCE HERBICIDE TREATMENTS: Surface-applied pre-emergence herbicides fail to control weeds unless rainfall occurs after application. The unpredictable rainfall pattern in Western irrigated areas makes this method unreliable. Recent research has been directed toward modified methods of herbicide application which may provide more consistent results.

Soil incorporation of herbicides at planting is being investigated.

In studies conducted in California in 1959 without rainfall, CIPC and CDAA provided excellent grass control without injury to cotton. Soil moisture at planting (at or near field capacity) was adequate to activate the soil-incorporated

herbicide. Had rain occurred after treatment results might have been very different. Further research under controlled conditions is necessary before the influence of rainfall and other variables can be determined.

• POST-EMERGENCE HERBICIDE TREATMENTS: An ideal herbicide for cotton would be one which could be sprayed on both cotton and weeds without injury to cotton, but which would kill emerged weeds and have sufficient residual properties to keep the crop weed-free for some time after application. This goal appears to be far off; yet, use of 2,4-D in flax to control broadleaved weeds or 2,4-DR in legumes to control broadleaved weeds reminds us that such optimistic goals are attainable. While one which can be safely applied to both cotton and weeds has not been found, certain new herbicides show promise as directed sprays in cotton post-emergence to weeds.

• POST-EMERGENCE SOIL-INCORPORATED HERBICIDE TREATMENTS: The feasibility of soil-incorporating post-emergence treatments depends largely upon how complicated the incorporation must be in order to obtain weed control. Should normal sweep cultivation provide adequate incorporation, herbicide application at the time of cultivation would not particularly complicate present cultural practices. Certain herbicides, EPTC, its analogues, and 2,6-dichlorobenzonitile were very promising in 1959 for control of watergrass in cotton.

While weeds undoubtedly will continue to create problems in cotton production, progress toward better methods of control is being made.

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Weed Control—Part 2

P. J. LYERLY
Superintendent, Texas Experiment Station No. 17, El Paso

Cotton production is not and cannot remain static. Within the past decade we have seen rapid technological advances in practically every phase of our economy. More efficient production methods are being developed; new products are replacing those long considered essential. Goods once thought excellent are no longer acceptable to the consumer. Ways of increasing hand labor output have become mandatory to offset rapid wage increases. Industry and producers who try to hold the status quo are being pushed out of business.

Cotton production, as we all know, is becoming more and more complex, depending on the interaction and coordination of many facets—proper planting, good varieties, proper fertilization, desirable moisture relations, adequate insect control, harvesting, proper ginning, and many others. Weed control is one important facet. Many of you are spending $20 to $50 per acre for controlling weeds. Hoe labor is becoming scarcer. The spindle picker cannot be used satisfactorily where grass is severe. In many sections of the West, the grass problem generally begins with summer irrigation and continues throughout the growing season.

Layby chemicals are potentially injurious to cotton. It's essential to use a rate and application technique which will kill weeds without injuring cotton. This depends on two factors:

1. **Age and size of plants**—Generally, the larger the plant the more chemical needed to injure it. Thus, we let cotton plants become older and larger before treating but treat weeds while quite small and susceptible to the herbicide.

2. **Depth of root systems**—Since the herbicide is primarily root absorbed, it must be leached into the root area by water. Under most conditions most of the herbicide remains near the soil surface, about the top inch. It is apparently absorbed by or attracted to clay particles and colloids near the surface. Thus if a plant has developed a root system below this region it will escape injury. Most weed seed germinate in the top one-half inch of soil and their roots are immediately in this zone. So, in this type program we let cotton attain enough size and develop deep enough root system to escape injury. The field should be cleaned of all weeds before applying layby chemicals. A proper amount of chemical can then be applied to destroy germinating weed seed.

• **Herbicides for Layby Weed Control**—Monuron is approximately five times as soluble as diuron and herein lies the main difference between them. Because of its greater solubility monuron is potentially more injurious to cotton and cannot be used on small cotton. Under most conditions diuron can be used when cotton is 10-12 inches high. For monuron cotton should be 18 inches high. Under average conditions diuron will control weeds for eight to 12 weeks. Monuron has less residual properties. In the West Texas-New Mexico area diuron is the only material recommended for general use at layby. Under special conditions such as where

morning glories are a problem, on heavy clay soils or for late application monuron may be preferred. When using layby herbicides the last one to three cultivations can generally be eliminated and the crop laid several weeks early.

These materials are prepared as wettable powder and applied in water spray. Soil texture is important in determining the rate. Layby herbicides are not recommended on very sandy soils because of the possibility of crop injury. For average loam soils one and one-fourth to one and one-half pounds of material is needed per acre. Slightly less material is needed on sandy soils and more on heavier soils. Past experience is perhaps the best gauge for determining the best rate for a particular farm. Recommended rates for monuron are essentially the same for diuron. This is a precision operation. If good weed control is to be obtained and crop injury avoided it is generally necessary to stay within one-fourth pound of the proper dosage.

1. Apply after cotton is 12 inches high. —Possible injury to smaller cotton has not been fully evaluated. Twelve inches is, of course, a rule of thumb. Age of cotton, depth of root system, type of soil and other factors are involved.
2. Provide uniform bed profile, free of clods, with gradual slope to center.
3. Have field free of all grass and weeds at time of application.
4. Select suitable rate of material.
5. Take necessary steps to secure correct rate of application of herbicide—Accurately determine spray volume by trial runs. Accurately weigh or measure amount of herbicide and water; control tractor speed by governor—not guess; use accurate pressure regulating valve —also independent pump power.
6. Make slurry of herbicide before adding to tank.
7. Use 20-30 gallons of spray solution per acre.
8. Make sure herbicide is in full suspension before spraying—Adequate tank agitation essential — boom and lines should not be over one-half inch in diameter.
9. Obtain complete ground coverage—minimum leaf coverage.
10. Do not continue spraying while stopped or moving slowly in field.
11. Irrigate within a few days after application to soak herbicide in soil — Cover as much of bed with water as possible. Irrigation not needed if soaked with rain.
12. Do not cultivate after application. —(Light harrowing may be necessary to work chemical into soil under some conditions.) Control isolated perennial weeds by spot oiling, dalapon, hoeing, etc.

The Spraying Systems Flooding nozzle has produced best results. It operates well at pressures down to 15 or 20 psi to give large droplet size. One nozzle per row is sufficient.

• **Wettable Powder Problems**—Monuron and diuron are wettable powders and the usual problems with wettable powders are encountered—screen and orfice plugging, settling of the chemical and pump wear. Screens if used should not be less than 50 mesh. Orfice diameter should not be less than about .04 inch. Use of a jet agitator is usually satisfactory for a small tank. If such an agitator is used the pump should have a capacity of not less than seven gallons per minute. A mechanical agitator is necessary for large tanks.

Settling in the spray boom and hose drops can be a problem particularly if large diameter pipe and hose are used. Three-eighths to one-half inch seems generally satisfactory.

Tractor speed greatly affects rate of chemical applications. For example, a K5 nozzle, 20 psi, 40 inch rows and one pound of diuron in 18 gallons of water at a speed of one mile per hour gives herbicide application of more than six pounds per acre. Increasing the speed to 10 miles per hour drops application to about .6 pounds per acre.

In some cases weed control is poor at the row ends but excellent otherwise. Invariably in these cases a power take-off pump is used on the tractor. When the driver slows down at the end of the field, pump RPM is reduced, pressure goes down and not enough spray is applied. Use of a tractor with an independent power take-off is highly advisable when using a power take-off pump.

It has been observed that layby herbicides work during a rainy season but not during a dry season. If you have to depend on rain to leach the herbicides in the soil perhaps you had better forget layby control. Diuron and monuron apparently breakdown rapidly when exposed to hot sun, so it is necessary to irrigate or have rain within about a week after application.

We feel use of layby herbicides has given a long step forward in controlling weeds in cotton. But it's a specialized and precision operation that can be of considerable value under many but not all conditions.

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Problems and Experiences With Cotton Defoliation

AUDY J. BELL
Agronomist, J. G. Boswell Co., Corcoran, Calif.

Why do we continue to have defoliation problems although the rules for getting a good defoliation are relatively well known?

• **Healthier Plants**—You might wonder what relation wilt resistance could possibly have to cotton defoliation. Close field observation shows that plants with high degree of wilt resistance will retain the ability to extract nutrients and water from the soil if these nutrients are present in excess quantities. Prior to 1954, many lower leaves that were produced on plants infected with verticillium wilt formed an abscission layer and dropped naturally. Many of you remember seeing fields that had produced a crop of grown bolls, yet had lost 50 percent or more leaves due to the clogging of the conducting tissue by verticillium wilt.

• **Higher Plant Populations** — High machine picking efficiency depends largely on a uniform, close spacing of plants in the row. Field trials have also demonstrated that cotton yields are about the same with plant populations ranging from 25,000 to 60,000 plants per acre. However, in many cases where high plant populations are established to obtain good picking efficiency and yield, defoliation and grade of the cotton harvested become adversely affected. Perhaps we should take a more sound and critical view of plant population and its effect on yield as well as on defoliation and grade.

• **Effect of Nitrogen** — Nitrogen has been one of the principal tools responsible for increasing and maintaining high yields of cotton in the San Joaquin Valley. The number of farmers who are under-fertilizing with nitrogen is limited. However, since the only purpose of growing cotton is to produce fiber that will return the highest possible net return per acre, I cannot foresee any farmer cutting his nitrogen useage to a level that would jeopardize production to benefit defoliation.

Recent evidence compiled by Dr. Basset of the U.S. Cotton Field Station at Shafter shows that on the basis of petiole analysis yields can be correlated with certain nitrate levels in the plant throughout the flowering period. From the viewpoint of defoliation, I feel certain that, if these analyses are carried further into September and early October, they could help to establish critical nitrogen levels in the tissue in order to obtain better defoliation. When these critical levels are established, a simple test for nitrate in the tissue probably can establish a definite date for application of a defoliant, assuring satisfactory and timely defoliation.

• **High Yield** — The continued increase in yields has probably contributed more to defoliation problems than the other factors combined. Looking into the physiology of the cotton plant, we see that for every fruiting node produced on the plant there is a corresponding opposite leaf.

The number of leaves tends to increase in direct proportion to the increase in yield. This increase in leaves can be explained further by the fact that the cotton plant will only set 35 to 45 percent of the flowers that are produced. Researchers at Shafter have proved that percentage of boll retention is about the same for any fertilizer and/or irrigation treatment used to alter yield. Therefore, the only way yields are commonly increased is in the production and retention of more flowers and a corresponding number of leaves.

• **Cyanamid Defoliation** — Aero Cyanamid is one of the oldest defoliants. Although its use is limited to certain areas and conditions, it certainly has practical advantages in our area. Cyanamid, applied at the rate of 35 to 50 pounds per acre, has given good defoliation on dense or green foliage. This type of growth cannot be defoliated satisfactorily with the liquid chlorates.

The main disadvantage of Cyanamid is that free moisture has to be present on the surface of the leaves at the time of application, or free moisture should be present a few hours after the material is applied. With the use of the sling Psychrometer, humidity and temperature instruments, we have been able to predict with a high degree of accuracy whether or not conditions will be favorable for Cyanamid defoliation in each field. I say "each field" because the temperature at which moisture will form on the leaf will depend upon the soil moisture in the field which affects the humidity. I should emphasize that dew will form in some fields although the temperature may not drop to the dewpoint predicted.

Using these instruments, we can plan an orderly defoliation schedule with the aircraft operators.

When the air is fairly calm, we start applying Cyanamid dust at about seven in the evening and continue through the night and early morning hours until the dew starts to dissipate. Cyanamid dust should be flown low to get maximum

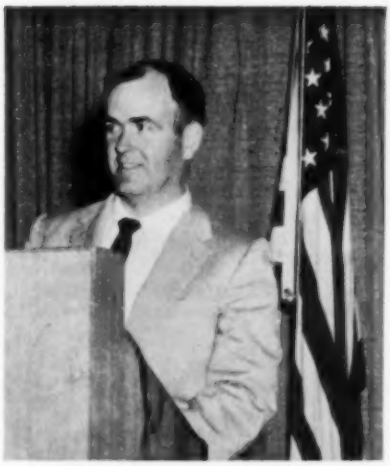
penetration through the plants and onto the lower leaves. Swath widths should be 25 to 33 feet to get a maximum of overlapping which prevents excess streaking. The principal objective is to give the plants a complete coating with a dust which will stick to the moist leaves.

• **Chlorate Liquid Defoliants**—There has been a tremendous increase in the use of mechanical pickers. With this, better chemical defoliation has become an absolute necessity.

Many defoliants or combinations of compounds have been tried in hopes of finding a defoliant suited to all conditions. Needless to say, this formulation has not been found. While the search for better materials continues, we still have the chlorates. When applied properly, they have given fair to excellent defoliation under optimum field conditions.

Rates of application in the San Joaquin Valley vary from two to four gallons per acre of concentrate in 10 to 40 gallons of water. In most cases, two gallons of material in 10 gallons of water per acre, applied by air, are enough for any single application. If the plants and leaves are so dense that a liquid defoliant cannot penetrate to the lower leaves, a second application at three-fourths of the original application is usually better than a heavy single application. A second application often can be restricted to certain small areas.

It is appropriate to mention that I have seen several instances where these heavy chlorate applications have shown a depressing effect on the growth of barley planted after cotton. This depressing effect is particularly noticeable when barley emerges following rains that have



WARREN E. CULBERTSON, manager, Santa Cruz Valley Operations, Farmers' Investment Corp., Tucson, is shown as he addressed the meeting.

wet only the top two or three inches of soil where the chlorate material is concentrated. This is also noticeable where barley is planted in beds and irrigated up resulting in the movement of the chlorate material to the tops of the beds. We do not know if this depression in early growth is reflected in a reduction in grain yield, nor do we know yet why chlorate defoliants cause it.

• **Defoliation and Quality Control** — A defoliant applied can significantly aid in maintaining high quality. Defoliation can reduce boll rot in rank cotton, preventing damage to tensile strength that can be severe.

Good defoliation can enhance conditions for machine harvesting before inclement weather develops. If defoliation can be accomplished so that few green leaves remain and cotton is harvested in the absence of dew, the cotton can be ginned with a minimum of heat. As much as two and one-half percent of the moisture in seed cotton at the gin can be attributed directly to green leaves and stems.

Good judgment is very important in defoliation. Keep in mind that quality, as well as yield, can be affected adversely if a defoliant is applied before bolls mature. The cotton fiber attains its maximum length in about 21 days after the ovule is fertilized. However, fiber characteristics such as strength and fiber maturity require approximately 42 days for full structure and development.

Defoliating before the fiber is mature can cause a decrease in yield, particularly in fields that are maturing a heavy top crop. We have a period extending from the last week in September to about the fifteenth of October in which to apply our defoliant. By knowing that 42 days are required to mature the fiber in the boll and that bolls set after the first of September do not normally open, we can use Oct. 15 as the deadline for applying a defoliant to the last field. This will minimize the possibility of harming the quality of the fiber, yet facilitate harvesting before adverse weather develops.

• **Summary**—We have been given cotton plants that are resistant to disease; we have planted them close together; we

have fertilized them intensively to produce high yields of cotton with a corresponding increased number of leaves. These factors, coupled with the necessity of harvesting a high-quality product by machine, intensify our problems of getting a good defoliation. We must seek better methods of defoliating our present well-bred cotton.

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Operational and Economic Aspects Of a One-Variety Community

LARRY B. NOURSE
Manager, California Planting Cotton Seed Distributors, Bakersfield

This is confined to the San Joaquin Valley of California, the world's largest one-variety community, comprising eight counties, 833,000 acres of cotton, and 13,000 growers.

We have been particularly fortunate in the operation of our one-variety program for many reasons, but five in particular:

1. We started when cotton was practically a new crop in the Valley.
2. The area covered is about the same elevation throughout and, with the exception of slight variations in temperature and soils, it is very uniform.
3. Growers requested the Legislature to grant them authorization to establish the program. It was not forced on them.
4. We have had the 100 percent cooperation of growers, cotton companies, ginners, financial, educational and governmental agencies.
5. All breeding work is done by the USDA at the Cotton Field Station, Shafter.

• **Formation and Legal Aspects** — The decision to have a one-variety law was the direct result of findings of a growers' committee, which investigated the situation throughout the Cotton Belt. It was enacted in 1925 at the request of growers, who wanted to establish the sound business principle of producing a single product of uniform quality that would be acceptable to mills over a period of years. Each county producing cotton was set up as a district, making the entire Valley a one-variety area. In these districts it is unlawful to plant any variety except Acala. Anyone violating the law is guilty of a misdemeanor. The law is part of the Agricultural Code of California. Violators have been few and minor.

• **Operational Aspects** — There are three "musts" for the successful operation of our program:

1. A one-variety law.
2. A seed breeding and research program carried on by a governmental and educational agency, cooperating with each other, and backed 100 percent by industry.
3. A non-profit producer's corporation to increase, care for, and distribute planting seed.

Number one has been explained.

Number two is carried on by USDA at the Shafter Experiment Station and the Brawley Experimental Station. The University of California cooperates by furnishing specialists stationed at Shafter, instead of at the college some 300 miles away. This is a requirement of distributors in making grants to the University for cotton research.

I would like to mention three things:

A. Industry supports the work 100 percent.

B. Kern County owns the land and leases it to USDA for 99 years. Except for the original investment in 1921, no Kern County tax money has been used. Sale of surplus crops has been sufficient for maintenance.

C. The distributors own and lease 98 acres adjoining the Station. They pay all costs and any excess earnings go into the Experimental and Research Fund.

Number three is the California Planting Cotton Seed Distributors, a non-profit producer's corporation which, through written agreements with USDA is charged with increasing the 60 pounds of improved seed received each year from the breeding blocks at the Shafter Station, to a point whereby a sufficient supply is available for every grower, in the least possible time and at the lowest possible cost.

I shall brief 14 points in our operation:

1. Policies are made by a board of seven growers. They have an advisory board, consisting of one each from USDA, University of California, State Department of Agriculture, State Farm Bureau, and one grower-at-large. Policies are carried out by a manager and four assistants.

2. Thirty cooperators (ginning companies) produce seed and act as advisors without vote.

3. We average 300 producer members.

4. Operations are financed by a handling charge per ton of seed sold for planting.

5. We use a system of contracts with our cooperators and a contract between cooperators and their best growers. All contracts and seed are controlled by distributors.

6. These contracts carry responsibilities:

For cooperators — to select best growers with cleanest ground, arrange for proper isolation, sack and tag seed properly, clean ginning machinery before a seed run, furnish daily ginning reports and sell planting seed.

For growers — to select their best and cleanest ground, take proper care in growing, keep noxious and other weeds from fields and conform to all rules and regulations.

7. Increase steps: The *first year* the 60 pounds of improved seed is planted on a five-acre isolated block away from the breeding nursery and is called *increase*.

The *second year* the product is planted on 300 acres, called *foundation*.

The *third year* the product is planted on 4,000 acres, called *parent*.

The *fourth year* the product is planted on 70,000 acres, called *Purple Tag*.

The *fifth year* the product is planted on the San Joaquin Valley's cotton acreage, called *Green Tag*.

It takes between 20,000 and 25,000 tons —or a half million bags of seed—to plant this acreage. This supply can be readily increased should controls terminate.

8. Isolation: Even though we have only one variety, each step of increase has to be isolated for one-half mile by the following step, except Purple Tag, which can be planted next to Green Tag or fallow ground, but must be kept one-half mile away from gin-run seed.

9. Increase and Foundation fields are contracted by the distributors, but supervised by the Station staff.

10. Parent and Purple Tag fields are contracted and supervised by the distributors.

11. All fields are inspected by the distributors throughout the season. Any weedy or poorly grown fields are rejected. All seed from rejected fields must be crushed.

12. All rules are adhered to and applied to every cooperator and grower the same, regardless of size of operation.

13. Seed price is determined by three items:

A. Average oil mill price paid for seed at gins during the seed-saving season is the base.

B. Extra cost of handling planting seed; includes cleaning gin machinery before running pure seed, cost of sacks and twine, hauling, storage, taxes, insurance, interest and distributor's handling charge.

C. Grower's incentive and pool risk, the largest part of which is to assist the producer in caring for his fields. A portion goes to the cooperating gin for supervision, handling and distributing the seed and a portion, in reality, is an insurance premium to take care of surplus seed, which must be carried to protect all growers against a shortage due to a bad season or other factors.

A special committee of growers and ginners study these items by securing from each cooperator his cost of saving seed. A fair average is taken and the total recommended to the directors and cooperators at their mid-year meeting in January for approval as the price of seed for the coming season.

Planting seed of all cooperators and growers is pooled. A common pooling price is established at the end of the season so each grower receives the same settlement per ton of seed.

14. Distributors contribute from $60,000 to $90,000 annually to the support of the Shafter Station and make grants of $25,000 to $40,000 to the University of California for cotton research.

• **Economic Aspects**—This program has permitted us to produce a premium cotton, superior in strength, uniformity and spinning qualities, not possible when different varieties are grown and ginned together.

Mills, who ultimately determine the value of cotton, have confidence they can order 500 or 50,000 bales and know they will receive a one-variety, quality, uniform product without mixture. They advise us that if we ever give up the one variety idea, and our standards of quality, we are headed for trouble.

Our cotton is in demand on the open market and is not produced for the loan.

This year several thousand bales were purchased directly by mills under their own ginning specifications. If this continues, the grade and staple system, which encourages growers to demand higher grades to meet an unrealistic government loan, regardless of the loss of some of the spinning qualities, may be on its way out. If this should happen, inferior and mixed cottons will be in trouble, whereas quality, uniform, one-variety cotton will always be in demand.

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1959 Pink Bollworm Control Program in Arizona

B. C. RHODES
Cotton Producer and Chairman, Pink Bollworm Committee, Arizona Cotton Growers' Association
Avondale

Cotton is produced in nine of Arizona's 14 counties but 80 percent of the crop is produced in two counties, Pinal and Maricopa. These two counties—because of the long season, hot climate and dense vegetative growth of the plant—provide almost ideal conditions for multiplication of pink bollworms and offer a chance of great economic damage.

Prior to 1958 the pink bollworm was pushed out of this central area three times, and the area had apparently been clean for nine years up to July 1958.

Annual damage in other areas was not great because winters are colder, all cotton is plowed annually, and the growing season does not encourage a great build-up of generations.

Annual inspections of our eastern counties showed a steady increase in populations of pink bollworm from 1955 on. This, combined with the heavy build-up in New Mexico and Western Texas, seemed to indicate we were headed for trouble.

During the 1957 ginning season inspections of over 6,000 bushels of gin trash failed to turn up a single larva outside the three eastern counties. In Graham and Greenlee Counties limited inspection did indicate an alarming increase in populations, even to the extent of economic damage. Due to several factors, the possibility of infestations in stub or volunteer cotton in Maricopa and Yuma Counties was overlooked. Gin trash from this cotton, ginned early in season, was not examined.

On July 6, 1958, a heavy infestation of pink bollworm was identified 18 miles southwest of Buckeye. The State Commission of Agriculture and Horticulture put into effect quarantine regulations covering the immediate area. Our association's Board of Directors met and decided the association could and would support only a program of eradication; we were not interested in control.

The U.S. Plant Pest Control Division immediately mobilized its forces and sent men in to work with our State entomologist.

On July 10 over 200 farmers attending a special meeting in Buckeye voted to assess all farmers in Maracopa County $1 per acre of cotton to raise a fund to treat the infested acreage.

Treatment in 1958 with DDT was designed to get the infestation under control, to limit the spread as much as possible, and to reduce the number of worms that would carry over into 1959.

As the result of a series of meetings between the State Entomologist, USDA people, and our Committee a statement of policy governing the eradication was developed which called for the following actions: (1) Adequate survey and mapping of infestations; (2) early maturing of the cotton crop; (3) stalk destruction and mandatory plow-up by a fixed date (as early as practicable); (4) prohibition of the growing of stub cotton in the entire state; (5) a delayed planting date; (6) insecticide treatment in 1958 to prevent further spread; (7) insecticide treatment of infested area in spring of 1959, starting with the appearance of first squares; and (8) rigid enforcement of quarantine regulations.

By the time picking of the 1958 crop was completed, careful checking had determined we had about 30,000 acres infested, covering a wide area of Maricopa and Pinal Counties with light infestations in four other counties.

In January of 1959 a conference between the state entomologist, the USDA Plant Pest Control Division and our Committee decided to treat with dust or spray all fields known to be infested, plus a buffer zone of all cotton within one mile, beginning with formation of squares. This took in a total of 75,000 acres. DDT was used as the active agent.

Inspection to date has failed to turn up any worms in treated area except for one place near Lehi, where we believe wind blew moths in after program terminated. At nine other locations in the treated area worms have been recovered in gin trash, but field inspection has been completely negative.

Results of the 1959 program are very encouraging. It definitely indicates our judgment was good a year ago, but that we must be on guard against developing a situation of alternate year treatments; and never forget that a good cultural program is essential. Insecticide program alone will not do the job.

Continued programs will depend on full cooperation of all groups concerned and particularly the full cooperation of all cotton farmers.

It would seem three factors contributed mainly to the 1959 program's success: (1) Cultural control—deep plowing, field cleanup and especially the elimination of stub cotton; (2) delayed and uniform planting dates; and (3) the insecticide program.

Last year we treated a total of 75,068 acres. For eight applications the total overall cost was $1,554,117 or $2.93 per acre per application.

When we realized the size of the problem facing us and that our cotton industry faced complete bankruptcy if this pest was allowed to exist, we approached the Arizona Legislature for financial assistance. In March of 1959 the Legislature appropriated $500,000 to be used in the eradication program provided the money was matched by our association.

Even though we were reluctant last year to enter into a full eradication program, it again certainly appears we made excellent progress. Because of the full survey made this last fall and to date, we now have the best picture ever of the extent of the pink bollworm infestation in the State.

We have from 20,000 to 25,000 acres to be treated in Maricopa, Pinal, Pima, and Santa Cruz Counties in 1960. Where fields are known to be infested, they and a buffer zone of one mile will be treated. Where worms in trash or moths were found, but field inspection was negative, those fields and immediately adjacent fields will be treated.

Let's consider what an eradication program means. To start with, every gin in the state installed a sterilizer through which is passed all seed. This meant an investment of about $8,000 per gin. The farmer pays an additional ginning cost

but not enough to amortize this capital investment.

In addition, each gin installed a special fan through which is passed all trash. This fan is designed to kill all worms in the trash by concussion.

The farmer must cover, or rebuild his trailers so seed cotton will not fall along the roadside as he goes to the gin; he must clean up his fields as carefully as possible and do a good job of plowing by a fixed date. Then he must delay planting until a fixed date. The farmer is also expected to go over his fields and ditch banks carefully to see that no volunteer plants have come up. And then, biggest job of all, our farmers last year were asked to raise a war chest to carry our share of the financial load of waging this all-out war. This we did by a series of voluntary assessments—$30 per ton of planting seed; $2 per acre of allotment; and $4 per cotton acre within the treatment area. Response was wonderful. Not only did we pay our share of the 1959 insecticide program but we have sufficient money on hand to take care of our share of the 1960 insecticide program.

The estimated cost for 1960 program is $450,000 to $475,000 which will not impose any particular financial problem.

We have agreed that growers who did not contribute in 1959 will be expected to participate on same basis as did those growers who participated last year, but that growers who contributed in 1959 will not be asked for additional money.

The 1960 program will be operated under same general conditions as last year, with such improvements as are indicated by experience.

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Panel:

Insect Control Problems, With Recommendations for 1960

California

J. E. SWIFT
Extension Entomologist, Berkeley

California cotton producers are faced with a number of problems relating to the control of insect and mite pests. Resistance of insects and mites to various pesticides has been found. All four species of spider mites exhibit in one location or another resistance to organophosphorous miticides, such as parathion, malathion, trithion and systox and others.

Lygus bugs are beginning to show resistance to DDT and toxaphene in some areas. The beet armyworm, salt marsh caterpillar, southern garden leafhopper, the conspersus stink bug and the cabbage looper all have developed resistance to one or several of the chlorinated hydrocarbon insecticides.

Another problem relates to "skip-row" cotton. The unplanted areas between rows may, because of weed growth, develop large populations of certain pests. These may attack cotton when their original host dies and they migrate from it. This was the case of the serious problem with the false chinch bug during 1959 in the San Joaquin Valley.

Stub and volunteer cotton is still a problem in some areas. This type of cotton production allows large populations of insects and mites to overwinter. This results in earlier infestations than normal. This is particularly true of the cotton leaf perforator and various species of mites.

Many farmers in California treat for pests without knowing for sure that they have a problem. This results in increased cotton production costs and affects beneficial insects. This may lead to outbreaks of pests that would normally have been suppressed by biological control. Unnecessary treatments may accelerate development of resistance to pesticides by insects and mites.

The problem of drift is assuming major importance in California at this time. It is felt that drift from treating cotton to near-by alfalfa fields is a contributing cause to the contamination of milk and dairy products. Unquestionably DDT and other chlorinated hydrocarbons can and occasionally do drift to alfalfa hay. It is important that the grower and applicators recognize this problem and select the material and the method of application carefully to prevent it.

Research on cotton pests and their control is being intensified. Pest control in cotton is important if we wish to maintain high quality and yields. To accomplish this a coordinated program of research and extension is necessary. This is the objective of the entomology program in California.

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Arizona

J. N. RONEY
Extension Entomologist, Phoenix

The control of insects in Arizona in 1959 dropped off considerably and the yield per acre was less than in 1958. If we had not had a very late killing frost, late in December, in the main cotton growing areas our yields would have been much less.

Lygus and black fleahopper, as well as some cotton fleahoppers, showed up in late June and continued to damage throughout July and parts of August.

We are still finding it difficult to convince the cotton farmer that these sucking insects destroy all sizes of squares; and further that, if you do not set the squares, you do not get blooms or bolls. We must sell the farmer again on the necessity of controlling Lygus and fleahopper if we intend to raise our yields. Cotton bollworms, cotton leaf perforators, and salt marsh caterpillars are problems at times, but if controls are timed, good results can be secured.

Research has shown that one application of an insecticide, with another three weeks later, is throwing away your money. You need two or more applications at seven to 10 day intervals. Late in the season, one application of an insecticide may economically control the salt marsh caterpillar or cabbage looper. Farmers, field entomologists, and insecticide field men must learn to time applications if economical controls are desired. Records show that Arizona's highest per acre yields of lint were secured when the greatest poundages per acre of insecticides were applied.

In 1960 we will recommend control of Lygus and fleahopper when five to six lygus, or 15 to 16 fleahoppers, or a combination of six of either, are present. We will recommend control of thrips in higher elevations when cotton is in the four-leaf stage and an average of one per plant in lower elevations. Start controls of cotton bollworms when three to four small worms show up on 100 terminals. Salt marsh caterpillars and cotton leaf perforators usually are kept under economical control if well timed applications of insects for Lygus, fleahoppers, or bollworms are used.

We will recommend either dusts or sprays. Always have flagmen present when using an airplane. Do not apply sprays in hot desert areas between 10 a.m. and 4 p.m.

Our recommendations call for use of common sense in control of all cotton insects. Records show that insecticides pay dividends. Follow recommendations at all times. When using a phosphate be sure to follow safety factors. Follow explicit directions for protection of humans, livestock, and others. Insecticides can get us in trouble if we disregard safety factors.

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New Mexico

JOHN J. DURKIN
Extension Entomologist, University Park, N.M.

Insects and their control cost New Mexico cotton farmers almost $3 million during 1959. And 1959 was considered one of the lightest years for insect damage in the state's history. Our greatest problem is getting cotton growers to realize the value of investing in insect control when it is necessary.

Growing a high-quality cotton crop involves many practices. These can be compared to the essential parts of an automobile—no part can be singled out as the most important and all parts are dependent on the others to make the car function properly. Insect control is one of the essential parts or practices necessary in producing cotton. It is no more or less important than any other production phase. Each production practice must complement or enhance all others.

Every operation costs the farmer. He actually invests in each production practice, just as a broker invests in stocks and bonds. The farmer hopes to realize some interest on that investment at the end of the season. A good farmer should be pretty sure of how much interest he will gain from each operation. Since each operation in growing a cotton crop complements and enhances the others, we might say money invested in each operation insures or increases the net return on money invested in other practices.

For example, Farmer A invests in seedbed preparation, nematode control, right amount of fertilizer, certified seed treated with disinfectant, weed control, and all recommended practices—except a sound insect control program. He will not realize the net return on his investment that he should.

On the other hand, Farmer B was

insect-conscious; in fact, he thought so much about insects that he was going to farm his crop with insecticides. He listed up an old sourghum field, planted cottonseed from last year's crop and carried out a sound insect control program on his spotty stand of stunted cotton. Next year, if Farmer B is still growing cotton, he probably won't control insects "because it doesn't pay."

To solve our greatest problem—getting cotton growers to realize the value of investing in insect control when necessary—we must make them aware of what insects cost and what the grower can do to prevent insect losses.

• **Need Consistent Control** — Our next problem, and one just as serious, is achieving consistent insect control. Insect control costs the farmer, and he must prove to himself that it pays before he will adopt it as an annual practice. Our aim in New Mexico is to get farmers interested in insect control so they will evaluate research results and insect control demonstrations in their area and eventually try and adopt sound insect control practices on their farms.

To achieve this, we must be able to insure consistent insect control on farms. Research entomologists can achieve control in experimental plots; and farmers who put demonstrations on their farms for the Extension Service can achieve control. Consistent insect control is a problem—because, in general, it is still hit and miss if it is not constantly supervised by someone who knows when harmful insects are numerous enough to warrant chemical control; when, what and how much chemical is needed; and how it should be applied.

Pesticide application is only one phase of insect control and is no more or less important than other phases. But I feel it is the weakest link in the chain of factors that must go into a cotton insect control program.

• **Proper Application Essential** — Research, Extension, and industry can make a cotton producer aware of the importance of insects and their control and develop his interest in, and eventually adoption of, sound control practices. But the applicator can make or break the whole program.

Pesticide application requires greater care and thoroughness than any other farming operation. But anyone from the most unskilled farm laborer to the highly experienced aerial applicator applies insecticides. No wonder control is often erratic.

Most phases of an insect control program are carried out by at least semi-skilled people. I know no farmer who relies on a bracero to check his cotton for insects. Highly-skilled personnel develop, manufacture, and formulate pesticides. Recommended rates and chemicals are determined by trained research personnel. Time of application is also determined by someone who knows something about insect control. But anyone can apply an insecticide.

Research, industry, and extension are trying to help the producer help himself through sound control practices. But before the producer adopts insect control he must have confidence that it will pay. And before he can gain confidence in sound insect control we must be able to assure him of reasonably consistent results. Therefore, it is everyone's job to make the producer aware of the importance of application.

I don't mean to imply that every time an insecticide fails it's due entirely to poor application. But I do believe the majority of our failures in New Mexico can be attributed to poor application.

In the final analysis, it is the farmer that must see to it that insecticides are applied correctly. He must calibrate his ground rigs. If he doesn't operate his application machines himself, he must supervise it closely to be sure the job is done correctly. The farmer pays for commercial application and he should be as critical of the job as he is of the grade and staple he gets back from the classing office. Asking for your money's worth and seeing that you get it is only good business.

We want our recommended insect control practices to give farmers the same results on their farms that have been obtained by the New Mexico Experiment Station and Extension Service on their research and demonstration plots; that is, high yields of early-maturing, high-quality cotton. I'm sure manufacturers, formulators, insecticide dealers, fieldmen and commercial applicators are striving for the same goals.

First, we must make the cotton producer aware of insect problems he must overcome. Then we have to show him insects can be controlled and that chemical insect control, when necessary, pays, thus developing his interest and eventually his confidence in sound insect control practices. We must then insure economic control with recommended chemicals by emphasizing the importance of proper application as well as correct timing of application of the correct amount of a recommended chemical.

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Five-Cent Cotton Through Refinements in Production Practices

WARREN E. CULBERTSON
Manager, Santa Cruz Valley Operations, Farmers' Investment Co., Tucson

Can you produce cotton for five cents a pound? Most of you will say emphatically, "No," just as I did when first asked that question.

I'm not a cure-all medicine man. However, cotton can be produced for five cents a pound right out here in the Irrigated West, and I'd like to tell you how we have done it on our Santa Cruz Valley farm south of Tucson.

This is a long, narrow valley. Our average field size is 32 acres with 70 percent of our fields having point rows on either end.

In previous years, we have planted turn-rows in an effort to utilize all of our ground. We continued to do this after acreage controls were put into effect.

One day while checking our field stand, it became apparent that our turn-rows were getting partially eliminated during cultivation, causing partial stands. Yet, under acreage controls, this same area was included as planted acreage and at best we had only a 50 percent stand.

By simple mathematical calculation it was apparent that an average of two and one-half percent of our acreage was not fully productive or not producing at all. On a 4,000-acre cotton allotment, this is 100 acres, or approximately 200 bales. We now leave 20 feet unplanted at each end of the field and have a premeasurement by the A.S.C. office. This assures us of full-planted acreage, in addition to eliminating the hand picking of turn-rows ahead of mechanical pickers.

We do not practice skip-row planting, but we still have outside rows in all our fields. We have always practiced alternate furrow irrigation and the outside row of cotton gets irrigated on the outside every other time.

Why not give our outside rows special care? We changed our practice to be sure the outside row got water, on the outside, in each irrigation. By actual test we have found these rows to yield 50 percent more. This increment of yield increase (on our field size and total allotment) amounts to an extra bale to the acre on acreage represented by the outside rows. With .086 of an acre per field, on a total of 125 fields for the farm, this amounts to a total of 10.65 acres of outside rows or an increase in total yield of 10.65 bales.

• **Reducing Costs** — We are all looking for ways to reduce costs when possible. We tried for several years to use less planting seed to the acre with precision planters. I must say we were not satisfied with our results and have returned to heavy seeding rates.

Plant spacing requirements vary, and I don't propose to suggest any certain spacing. However, be meticulous in planting enough seed to obtain a stand that will result in maximum production. An average of one 40-inch skip in every 100 feet of row, when you are shooting for 10-inch spacing, means a three percent loss on stand. In our operation, this would amount to a skip of 120 acres, or approximately 120 bales, assuming 50 percent is recovered by large plants, as is the result on outside rows.

Have you ever had a cultivator man who prided himself in how fast he could make his turn on the end? If so, check

him and see if he is coming out and going into the rows straight. We have found many times where he has cut out the first one to four feet of the row in his haste. Such carelessness can be exceptionally costly when small fields are prevalent. Unfortunately these are the fields that cost more to cultivate because of more turns to make. Watch those turns or your loss of yield will increase. This is virtually eliminated by using 20-foot disced areas at each end of the field.

In our operation we have developed the phrase "farming for free," to a high degree. In many instances, because of our terrain, we have been able to lengthen rows another 10 to 30 feet by removing old buildings, brush, and abandoned roads. Look at every field you have with the idea of enlarging it by extending rows. This is one of the cheapest ways to raise cotton in our area.

These practices have added in excess of 330 bales to our total yield on 4,000 acres, or approximately a four percent increase in yield. This is $50,000 in gross income. This cotton is five-cent cotton.

The first day I arrived in the Santa Cruz Valley, while driving around the ranch, I came upon R. K. Walden, president of our company. We came to a point where all the tail water meets, making a single stream going out of the ranch. There was an extra large amount of tail water passing by. Walden lost no time in locating the irrigator responsible and said to him, "Arthur, you see that tail water? That is just as if I were taking a $5 bill out of my billfold and throwing it down the stream every hour. Have you ever heard of anything so stupid?"

Arthur got the point. I got the point also and I believe you do too. Take a second look at your operation and see if you, too, can't produce some cotton for five cents a pound. You may also be throwing $5 bills down the stream every hour.

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Panel:

Gearing Cotton Production Practices for Lowest Cost and Highest Quality

California

WALDO WEETH
Cotton Producer, Coalinga

Here are some of the things we feel are "musts" for top yield and high quality.

Land should be well worked and plowed, if cotton is following cotton. Our normal practice is to inject 100 units of nitrogen in all land that is to be planted to crops.

On cotton land, we inject an additional 50 units of nitrogen and 100 units of phosphate. This is done when we bed the land in 40-inch beds.

We apply a minimum of 12 inches of irrigation water.

Beds are left until planting time, unless they become weedy. In this case, they are harrowed or partially worked down.

At planting time, beds are worked down to about one-third of their original height.

Our planting seed are acid delinted and treated with Thimet and Plantogen. Dithane is used at planting time on any land that is likely to cause problems of damping off, etc.

Acala 4-42 is our seed variety, of course; and to me there should be no question that this is the variety to use in the San Joaquin Valley.

In our area we think in terms of four summer irrigations, spaced not more than 20 days apart. The first summer irrigations we try to complete by June 15. (Normally, this is about two and one-half months after planting.)

We try to complete as much of our cultivating as possible before starting summer irrigations. We try to shape our beds and furrows so they will let mechanical pickers operate at the greatest advantage for recovering all of the cotton.

At harvest time we try to get a good defoliation job, using magnesium chlorate as a defoliant.

All pre-harvest production practices should be geared toward mechanical harvest.

The picking machine should be in first class condition with all the latest improvements for removing trash from the seed cotton.

Picker heads, conveyor systems and baskets should be cleaned regularly, and discard this material.

Watch pressure plates on pickers to see that no cotton is dropped on the ground, but likewise don't bark the stalks or stain cotton.

Watch spindle oil moisture to be sure it is not too much or too little.

Do not tramp trailers.

Cooperate fully and closely with your gin manager and ginner. Know what is taking place.

Last year on 1,150 acres of solid planted cotton we ginned out 3,127 bales of machine picked cotton; over 92 percent of the crop went Middling grade and better.

Every cotton growing area has their problems and we will progress only as we move intelligently in the right direction.

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Arizona

JOE SHEELY
Cotton Producer, Peoria

In the Salt River Valley of Arizona our costs on tillage, land preparation and seed are basically fixed. There is little we can do to cut costs in these fields. However, there are opportunities for savings on fertilizer, water and harvesting—especially harvesting.

We have built a fertilizer plant—both NH, and a dry plant—which has been very advantageous to farmers in our area. Three years ago when we opened the dry plant, NH, was costing 11 cents per pound. This has been reduced to five cents. Cost of 16-20-0 has been cut from $96 a ton to $77 a ton. Though we can't give complete credit to the plant, it has been a big factor. Our NH, plant will go into production within the next 30 days with an output of 70 tons. We feel this will help to lower or at least maintain the present fertilizer cost.

• **Gin Saving**—We have purchased our own gins and, in effect, have saved on ginning costs. If you can save a few dollars on fertilizer and a few on ginning you at least have a start toward more efficient operation.

Water is one of the most expensive production items in some outlying areas of the Valley. I operate in one of these areas and my water costs on cotton run approximately $55 per acre. We have gone to pump back systems. This system

JIM TAVERNETTI, left, and LYLE CARTER, research engineers with the University of California and USDA, point out features of an experimental cotton planter at the Shafter Station.

picks up any tail water and pumps it back to the high point. Actual cost of this water is 35 cents per acre foot as compared to $8 per acre foot for pump water. This pump back system is restricted by amount of available tail water, but it has proved to be of great economic value on any farm which is 160 acres or larger.

• **Machine Harvest** — I feel that the biggest opportunity for cutting costs in our area is in use of machine harvesting. An annual depreciation of $1,860 per year and $350 for taxes makes a fixed cost of $2,210 per year for machines. Repairs cost $850 per year. An operating cost of $21.25 per day for a 60-day period would be $1,275. This is a total of $4,335 per year per machine. Operating on 150 acres with a yield of two bales per acre, total costs would be $28.90 per acre, or $14.45 per bale, including a defoliation cost of $7.50 per acre.

On this basis, machines save us about $40 per acre over hand picking.

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Texas

JIM BOWDEN
Cotton Producer, Tornillo

Producing a cotton crop is a blending of many operations with close supervision and management.

Major steps which go into my program are:

1. Deep plowing and leveling.
2. Prior planning for accommodation of machines, picker, etc.
3. Proper soil preparation for planting.
4. Planting, using the best seed available.
5. Cultivation—application of Karmex, fertilizer and poison.
6. Defoliation.
7. Machine harvesting.

While we are constantly trying to cut down on manpower on the farm, we cannot sacrifice production. Therefore, we must maintain the soil in the best possible manner. I follow a program of deep plowing, mixing different soil types to get a more uniform texture and some land leveling each year. We have leaned toward short irrigation runs, with very little fall in the land, for ease of irrigation, control and utilization of water.

Since the mechanical picker came into the picture, we have taken a long second look at these short rows because of the inconvenience of turning and loss on each end. But I still believe the inconvenience of short rows is offset by more efficient water use, better stands and greater yield.

• **Planning Ahead**—Before preparing our land for planting, we devote some thought to row spacing and turn-row width to accommodate mechanical pickers. Since we are operating under an allotment system, we want to plant our allotted acreage and still have sufficient turn-rows. With the larger two-row machines, I have decided that 24-foot turn-rows are adequate. This should eliminate picking row ends by hand.

We list double beds, apply Nemagen where fumigation is necessary, water rather heavily, then harrow beds to the desired condition for planting. The fewer operations you can perform in preparing land for planting, the less compaction you will have, and the better off you are.

We now plant about 80 pounds per acre of acid-delinted seed and thin with a mechanical chopper or rotary hoe. While we have virtually eliminated all hand labor up to this point in the crop, we find it necessary to clean our fields once with men before applying Karmex.

I have not tried any pre-emergence spray for weed control, but I am watching with considerable interest some of the tests being conducted and we will probably use it soon.

I apply Karmex at the rate of one and one-half pounds per acre when cotton is about 12 to 18 inches high. This is done with a tractor-mounted spray rig, covering three beds at a time. This application should be followed with a heavy irrigation to activate the Karmex and leach it into the soil.

• **Fertilization** — The past few years we have changed to liquid fertilizer, applied in irrigation water. I find that about 180 pounds of available nitrogen do the most good in terms of production as compared to cost per acre.

I usually apply about six pounds of 2-10-40 poison per acre when squaring begins and maintain a systematic application program each 12 days, increasing the amount of poison as size increases. Later in the season we usually have to use other poisons, depending on the insect bothering us. We apply poison by tractor-mounted duster rigs until late in the season; then usually have to dust a couple of times by plane.

To pick with machines and start early enough to get around, you have to defoliate some of your cotton. In some instances we have found that defoliated cotton picked a little cleaner, while in other cases, such as in Pima cotton where we didn't get to it until late in the season, there was no difference in grade. In most cases defoliating rank, green cotton helps it mature quicker.

• **Harvesting** — I have estimated that a two-row mechanical picker with a competent driver will replace at least 50 hand pickers in short staple cotton with about a bale per acre open. The machine will probably pick as much Pima as 70 men.

Each year we are faced with higher costs and lower prices. While it is easy enough to show how you can pay for fumigation or fertilizer, I just wonder what we are going to do when the time comes when you don't have the cash to pay for those "fringe necessities." In order to pay for fumigation at $10 per acre with 30-cent cotton, you must increase the yield only 100 pounds of seed cotton per acre. This is well and good, but it seems that with all the labor-saving devices, etc., we are using, we tack on a little here and a little there, until at the end of the season you have about two bales tied up in the crop. We all know that a four-row cultivator will cover more ground than a two-row cultivator, but we also know that a farmer can't just junk his equipment every time he wants to and replace it with something else regardless of the labor saving involved.

When you have geared your farming to fit a certain economic situation, you can't change overnight.

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• Port Publication Features Mill

MANY PHOTOGRAPHS of Ranchers Cotton Oil, Fresno, Calif., and information about the firm and cottonseed products appeared in a recent issue of Tideways. This is the official publication of the Port of Stockton.

Ranchers' officials pictured in the publication included Earl J. Cecil, general manager; Bill Burns, sales manager; C. R. Rathbone, controller; George E. Cavanagh, chief chemist; and E. D. Hudson, plant superintendent.

Services Held for Ginner

Funeral services were held March 6 at Greenville, Texas, for Sam H. Fulfer, 77. He had been a farmer and ginner most of his life.

His wife, five sons and two daughters survive.

Farm Labor Outlook

(Continued from Page 12)

Although the dollar cost of the consumer market basket has increased, wage earners had to work only about three-fourths as many hours in 1959 as in 1947-49 to buy the same amount of food. This is because consumer wage rates were going up as farmers' prices were going down.

This has been given no consideration when discussing agricultural wages and benefits with government and other organizations. Cotton farmers, for example, face price reductions set by law for at least two more marketing seasons.

The amount of domestic agricultural labor available is becoming less each year and the terms under which they may be obtained more stringent. The number that may be obtained during the next harvest season or beyond is difficult to determine. The trend is toward less, rather than more. Right now it is possible for some employers to make up the difference with Mexican Nationals. How much longer this will be possible is problematical. Many are of the opinion that this program is on the way out; it is just a question of time. Mechanization, chemicals and other means of reducing manhours of labor and resulting cost may be resorted to as rapidly as possible. This does not mean it will happen this year or next.

Public Law 78 expires on June 30, 1961. The Consultants' Committee stated that although the farm labor program has been successful in obtaining unskilled workers to meet labor shortages and helping to eliminate illegal entry of "wetbacks," they would recommend the extension of Public Law 78 only if it were amended to give the Secretary of Labor broad powers in its administration, including setting of wages.

Secretary of Labor Mitchell indicated in several speeches made last year that legislation might be introduced to accomplish these desired objectives. So far there there has been no indication by the Secretary as to whether such legislation may be proposed by his office during this session of Congress.

Congressman E. C. Gathings of Arkansas, along with others, has introduced legislation to extend Public Law 78 to June 30, 1963. Other provisions of the bill are: (1) That Secretary of Agriculture must jointly approve with Secretary of Labor any regulations relating to the employment of farm labor; and (2) that any finding that Mexican Nationals adversely affect wages and working conditions of domestic workers must be based on "substantial evidence establishing that employment of Mexican Nationals has definitely depressed or would definitely depress the wages and working conditions of domestic farm workers in similar employment within the same area of employment." Such findings and any wage adjustments have to be a joint determination by the Secretaries of Agriculture and Labor. Furthermore, in making any adjustment in wages of Mexican Nationals, national trends in farm prices, net farm incomes, wages of farm workers the preceding year, and cost of compensation other than cash would be used as criteria.

• Bracero Inspection To Be Increased

INSPECTION of Mexican labor facilities will be increased by the federal Bureau of Employment Security this season. Twenty-eight additional field inspectors are scheduled to begin work after July 1.

Bureau Director Robert C. Goodwin said this would permit employer payrolls to be inspected for compliance with wage regulations, and also will enable inspection of 8,800 housing facilities.

Violations of housing regulations were found in more than half of the inspections made during the past six months, Goodwin added. Seventy-eight bracero camps were closed.

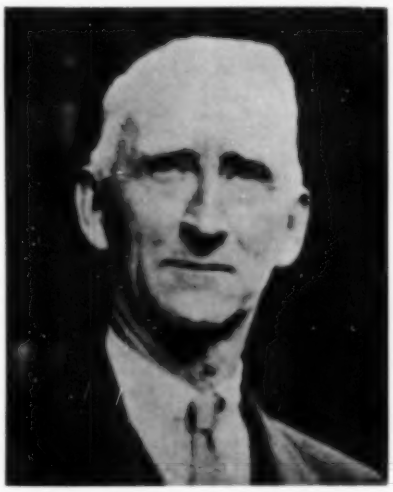
■ **E. A. KOELLE is now owner of Mid-Val Gin, Inc., Donna, Texas, formerly Burkhart Gin No. 3.**

With Lummus 43 Years

93-Year-Old Inventor Still Interested in Gins

A 93-year-old inventor of cotton ginning machinery is just as interested in the cotton industry today as he was durin his 43 years of active work. He is Thaddeus S. Grimes, who joined Lummus Cotton Gin Co. in 1905 and received more than 30 patents during his 43 years with the firm.

Grimes was 93 last Oct. 30. Now retired from active work with the company, he still takes a keen interest in any



THADDEUS S. GRIMES

new Lummus development. At present his interest is centered in the new Super 88-saw Gin, which evolved from the famous double moting gin he perfected.

He makes his home in Columbus, Ga., with his daughter, Mrs. C. W. Spear.

As designing engineer for Lummus, he perfected a variable speed gear mechanism for cotton gin feeders, which became known as the Waffle Iron Control. On Dec. 20, 1910, a patent was issued to the company for this device, which was the first of his many contributions to the cotton ginning industry.

These earned him national recognition in 1940 as "the inventor who has contributed most to the development of the ginning industry during the past 20 years," according to the award as a Modern Pioneer of America made by the Maryland Academy of Science and the National Association of Manufacturers in Philadelphia, upon the recommendation of their committee of distinguished scientists.

Among his developments, some of the most outstanding were the one-story press, the motor fan assembly, the direct connecting of the saw shafts, the double break air blast nozzle, the double spiral picker roller on the huller gin, the open throat ginning rib, automatic feed control, and the double moting gin.

As a boy in Hubbardston, Mass., Grimes built windmills and watermills—finally devising a steam engine with parts of a copper pump for a cylinder.

■ **LAWRENCE KRENECK has been elected president of Nada (Texas) Farmers' Coop Gin.**

Spurge and Elly

(Continued from Page 14)

Association and a director and vice-president of the Texas Cottonseed Crushers' Association.

Morrison has been active in many civic and service groups, including the Kiwanis Club, and Chamber of Commerce. He is a Baptist, 32 degree Mason and Shriner.

But, next to Elly, cotton ginning is his first love, as it has been since he first worked at the 4-80 Oklahoma gin where a single 100-horsepower motor pulled everything in the whole plant.

• **Firing Backfired**—Spurge is a genial, kindly person who has many friends throughout the cotton business in Oklahoma, Texas, Arizona and New Mexico, and other states. He's so good natured that there probably have been few times that he ever fired anyone—but he remembers vividly one time that he did.

A truck driver, for the oil mill which Morrison was managing at that time, was so unsatisfactory that Spurge finally had to let him go. After firing the man, Morrison went to an Oklahoma Cottonseed Crushers' Association convention. While there, Spurge got a frantic telephone call from home:

"That trucker you fired has fenced off the road to our plant," the voice at the other end of the line told Spurge. Investigation proved that the fired man owned part of the land upon which the mill road was built, and it took months of court litigation to get a permanent injunction to open up the road again.

"I've been mighty careful about firing anybody ever since," Spurge commented.

Mr. and Mrs. Morrison moved to Fort Worth when Chickasha moved its headquarters there, and they are especially delighted now to have their son and his wife living at nearby Richardson. "Delighted" to have the children within a few miles; and overjoyed to have the grandsons—Rick, age five and a half, and Steve, age four.

as viewed from The PRESS Box

• Farm Law Hearings

MANY HEARINGS on legislation related to cotton have been held, or are scheduled in Washington, the National Cotton Council reports. Among these are:

Export Subsidy — The House Agriculture Committee has declined to make any recommendation on a proposed variable export subsidy, which would have made cotton move from the West or East Coast at the same price. The West opposed this.

Mexican Farm Labor — Hearings start March 22 on extension of labor legislation and new proposals. (See related story in this issue.)

Textile Imports — The Tariff Commission has completed hearings on cotton textile imports. Cotton industry spokesmen and Cotton Belt Congressmen testified for import limitations.

• Major Research Finding

A MAJOR RESEARCH DISCOVERY has been announced by Du Pont Co. For the first time, researchers have duplicated in a test tube the reaction nature uses within a living cell to create the nitrogen compounds without which no life can exist.

They have discovered a technique, long sought, by which nitrogen-fixing chemicals can be separated from bacteria and stimulated to perform their function outside the bacterial cell.

Nitrogen as a gas is available in huge quantities in the atmosphere, but it can be used in this elementary form only by certain low forms of life. The nitrogen gas of the atmosphere is so unreactive that the chemist must use extremely high temperatures and pressures to "fix" it—convert it to chemical compounds which can be used by plants. It has long been known that some bacteria are capable of fixing the elementary nitrogen of the atmosphere at ordinary temperatures but how these bacteria do it has remained a mystery. Scientists have agreed that some means of isolating from the living organism the chemicals that perform this operation would provide the key to the mystery.

Full understanding of this vital biological process is expected to answer many significant questions about the chemistry used by nature. It can also lead to greater farming efficiency and to increased food supplies in undernourished areas.

• Leading Cotton Counties

CALIFORNIA garnered most of the honors for leading cotton-growing counties in 1959, ginnings show.

Kern County, California, was first in the nation with 543,875 bales; Fresno County, California, was second with 483,878 and Tulare County, California, was third with 329,264. Maricopa County, Arizona, was fourth with 254,579. Another California county, Kings, was fifth with 253,842 while the Mississippi County in Arkansas was sixth with 242,293. Pimal County, Arizona, was seventh with 229,648. Lubbock County, Texas, was eighth with 209,790 bales. Hidalgo County in the Rio Grande Valley was ninth with 200,422 bales. Hale County, Texas, was tenth with 180,274 bales.

While these ginning figures are not final for 1959, they represent about 99 percent of the cotton harvested. Final figures will be available at the end of March.

• No Law, but New Rules

NO COTTON LEGISLATION is likely to be passed at this session of Congress, most observers agree. Some changes in regulations, however, may aid the cotton industry. American Farm Bureau has recommended "no change in cotton provisions of Agricultural Act of 1958 at this time." Burris C. Jackson, a leader in cotton legislative activity, has said that USDA officials have given assurance of changes in regulations that will be helpful, but added that he sees no prospect of new legislation.

• Location Influences Sales

SALES of mayonnaise and salad dressing are greatly influenced by the location of the products on grocers' shelves. A USDA survey showed more sales resulted when the vegetable oil foods were on the lower four shelves than when displayed on the top shelf or all five shelves.

• Protest on Picker Lap

PROTESTS against importations of "picker lap" have been made to the Commissioner of Customs. The National Cotton Council pointed out that this is not processed cotton, but raw cotton in practically the same form as when ginned.

■ **LAURA FOREMAN, daughter of the W. L. FOREMANS, National Cotton Council, was pictured recently in The Commercial Appeal working in the Memphis arthritis fund campaign.**

After Long History in Industry

Georgia Oil Mill Dismantled

CALDWELL & CO., Madison, Ga., has dismantled its oil mill, cotton gin and feed mill, sold its property and discontinued doing business after 23 years of activity in this area. The company began as a branch of Caldwell & Co. of Spartanburg, S.C., in 1936 by reactivating the property formerly owned by the Empire Cotton Oil Co. J. Edmund Caldwell, president of the company, has been in active management of the mill since it began business in 1936.

The company's past affiliation has been with one of the older cottonseed crushing establishments in the Southeast, having been organized in 1899 as the Campobello Oil Mill of Campobello, S.C., by the late J. M. Caldwell, grandfather of J. E. Caldwell. Caldwell's father, the late James B. Caldwell, Sr., of Spartanburg, was well known throughout the industry. It was during his lifetime that the comcompany expanded its operations into Georgia.

The continued curtailment of cotton acres and the trend in the trading area of the mill toward the cultivation of certified planting seed made the operation of the oil mill an unprofitable venture.

During the time Caldwell & Co. was in business in Madison, Ed Caldwell has been active in the industry. He is a former president of the Georgia Cottonseed Crushers' Association and a director of the Southeastern Cottonseed Crushers' Association. He was a former director of the National Cottonseed Products Association, and served several times as a crusher-delegate to the National Cotton Council. He was active in the Georgia and the Southeastern Ginners' Association, a past president of the Madison Kiwanis Club, vice-chairman of the official board of the First Methodist Church of Madison and treasurer of its board of trustees.

His wife is the former Jean Culbertson of Woodleaf, N.C. They have two children, John E. Caldwell, Jr., and Mrs. G. S. Adams; and a grandson, William Webster Adams.

■ **JACK CANNON, Expeller operator at Producers Cotton Oil Co., Fresno, is only 31 years of age, but has worked for the firm 16 years.**

National Ginners Plan Dallas Program

National Cotton Ginners' Association plans timely discussions of current problems at its annual meeting in Dallas. The meeting will be held at 1:30 p.m. Sunday, April 3, in Parlor G on the sixth floor of the Adolphus Hotel.

Ginners who are in Dallas for the Texas Cotton Ginners' Association convention (see Page 8) are invited to attend this National Association meeting.

Committee reports, a discussion of cotton quality and other business is scheduled. The selection of the National Ginner of the Year, to receive the Horace Hayden Memorial Trophy, is an important feature of the annual meeting.

Officers of the National Association are Jerome Jalufka, Robstown, Texas, president; Carl Meriwether, Las Cruces, N.M., first vice-president; J. H. Williams, Nachitoches, La., second vice-president; C. A. Harvin, Summerton, S.C., third vice-president; Carl Trice Williams, Jackson, Tenn., secretary-treasurer, and Tom Murray, Decatur, Ga., executive vice-president.

New Bulletin

BAUER'S NEW PRESSURE FEEDER

Bulletin P-33, describing the new No. 564 Pressure Feeder, is now available from The Bauer Bros. Co., Springfield, Ohio.

Photo diagrams show how the feeder is used to load bulky material of low density, or extremely wet materials, into continuous screw presses under pressure. This forced feeding greatly increases press capacity and versatility.

The unit can also be used separately for various low pressure washing and thickening operations involving fibrous materials. The bulletin includes data on typical applications, operation of the unit and its advantages in force feeding.

Death Takes James Hubbard

James B. Hubbard of Dallas died March 10 in his home. He was 68.

A native of Texarkana, he was head of J. B. Hubbard Co., cotton merchants, which he established in 1938. Hubbard was a past president of the Dallas Cotton Exchange, the Texas Cotton Association and the Dallas Cotton Shippers' Association, and a past director of the American Cotton Shippers' Association.

New Texas Farm Group

Texas Federation of Agricultural Commodities has been formed to "seek general enabling legislation to help farmers promote sale of their produce."

Ken Kendrick, Stratford wheat farmer, was elected president on March 4 in Dallas. Ross Wilson, Gorman, Southwestern Peanut Growers' Association, is secretary; and Sidney C. Reagan, Dallas, legal adviser.

Elliott Named Gin Manager

Jess Elliott is the new manager of the Clovis-Sanger Co-op Gin in California, succeeding Otis T. Page. Elliott has been assistant manager of the gin at Laton.

"hard man to find"

Sure, the ginner *is* a "hard man to find" . . . especially during the off-season. Yet this is the time of year when you *most* need to get the ginner's attention . . . because right now he's planning improvements for the coming season and deciding what supplies he will need to keep his plant humming at top speed when the new crop starts to move.

Advertisers who use The Cotton Gin and Oil Mill Press know the ginner is *easy* to find, at *any* time. The PRESS is an old and trusted friend that can get you an audience with the ginner whenever you want it. It has been bringing advertisers and ginners together for fifty-seven years.

Now, while the ginner is planning his operations, make sure he has an opportunity to consider *your* products or services. There is no better . . . or more effective way . . . to do this than through the advertising columns of The Cotton Gin and Oil Mill Press.

the cotton gin and oil mill Press

3116 commerce st dallas 26, texas

This is our sixty-first year of publication

Expense Accts. for Yacits and Corkage

Love, Taxes and Loose Money

By B. Ubberson

CHITLING SWITCH, ARK.

DERE MR. EDITOR:

Way back yonder in the dark age when this here country did not owe very much money to itself and when men was men and boys wasnt cowboys—I went to what is laffingly called nowdays—school—and I studded the Algebra language and when I learnt the answer to x plus why in pants was x square plus 2 X Why plus Why in a square—I tell you right now that I thought I was pretty smart but compared to the rooster that got up this here govt incoming tax—I wasnt nothing but a pigsmy. You know theys a old saying that in the offspring a young fellers thoughts turn to thoughts of love—and etc—,—but you take a old blister like me —my thought sort of turn to making up this here incoming tax and them thoughts aint nothing like you would want to print in the Press because you would be incalculated for abusing the mails for calyphoney or something.

I tell you right now that when a man can sit down and figger that 600 & 00/100ths a yr. is enuff exemptons for a growed up man to live on and how much he ought to be allowed for caugh syrup and poletus plasters and etc to keep healthy—wealthy and wise—why when he can do that and then divide it by 2 and put the cubes root where it ought to be —that feller is nothing short of a genus homo. I see that this here no ways and no means com. up there in Wash. is figgering on doing away with exemptions—except maybe expense a/c's for yacits and corkage—and I guess it is all right because they aint none of us here taxes payers that aint rich enuff to give up that there personality exemption—but if you was to remove the exemptions on yacits and corkage—why you would hurt the lead production on the U. S. in a lot of ways—more a speshally the lead that is now being produced in the seat of the britches and that there jest would not do a tall—this here country jest cant afford to go back to digging lead out of the ground. I aint got no more time—I got to git back to making this here taxes report and studding up on algebra or something.

YOUR'N,

B. Ubberson

CHITLING SWITCH, ARK.

DERE MR. EDITOR:

I warned you that Ole Man Ubberson sometimes hits the hammer on the nail and I done it. I told you that these here Swiss was going to junk their navy that has been raising h— for so long and I git it thru the grapevines root that this here UN served notice on this here Swiss Chese that if they did not junk their navy — that a policemans force would come over there and make them stop yodeling around. Well — the Swissmen called their grossrat into session and after a long speech or 2 by this feller Wm. Tell —it decided to junk their navy pervided that the UN see that they was pd a billion or so dollars and the UN agreed pervided that the US congress would approve it and they knowed that it wasn't no trouble a tall to git the US congress to pay out a billion or so if the UN or the Soupreme Cart said to. So the Swissmen is out of the way and we got peace except that this here USSR keeps on gitting folks kind of stirred up in this country because they figger if they kin git us to fighting among ourself and buying on a credit—why it wont be no trouble a tall to come over here and take Long's Island and a few other places—I don't see no use a tall in worrying about civil rights —labor rights—copy rights or any other rights and etc—the thing we got to do is stop this here d—— foolishness that has been going on in this here country since 19 and 30. Right now theys a lot of talk about tight money and this here country is so loose with money that it scatters it all over this here world and theys shooting some of it moonward. Tight money dont bother me none because I like to see things git tight and maybe we need a few of these here tightwads in Wash. Anyways I kin buy ennything I want on a credit without no trouble a tall.

YOUR'N,

B. Ubberson

New Co-Op Formed

A new cooperative gin has been formed by a group of farmers in the Coalinga, Calif., area, under the name of the Coalinga Farmers Cooperative Gin, Inc.

Officers are: Waldo Weeth, president; Joe Lovelace, vice-president; and Ray Kellar, secretary-treasurer. The seven directors and their alternates are Walter Burnett and LeRoy Burnett, alternate; John C. Conn and Larry Conn, alternate, and Ray Kellar, second alternate; M. E. Dollahite and Lew Allen, alternate; Joe Lovelace and Tom Lovelace, alternate; George Uhl and Howard Uhl, alternate; Harold Weeth, no alternate named; Waldo Weeth and Wallace Weeth, alternate, and George Weeth, second alternate.

Ewel Hudson, at present assistant manager of the Stratford Cooperative Gin, Stratford, Calif., has been selected as manager for the Coalinga co-op. The cooperative will market its cottonseed through Ranchers Cotton Oil Co. and will be a member of Calcot, Ltd.

Farmers' Stock Peanuts Can Be Stored Six Months

Farmers' stock peanuts can be stored about six months without a change in quality, USDA has found.

A four-state study is summarized in Market Research Report 381, available from USDA, Washington 25.

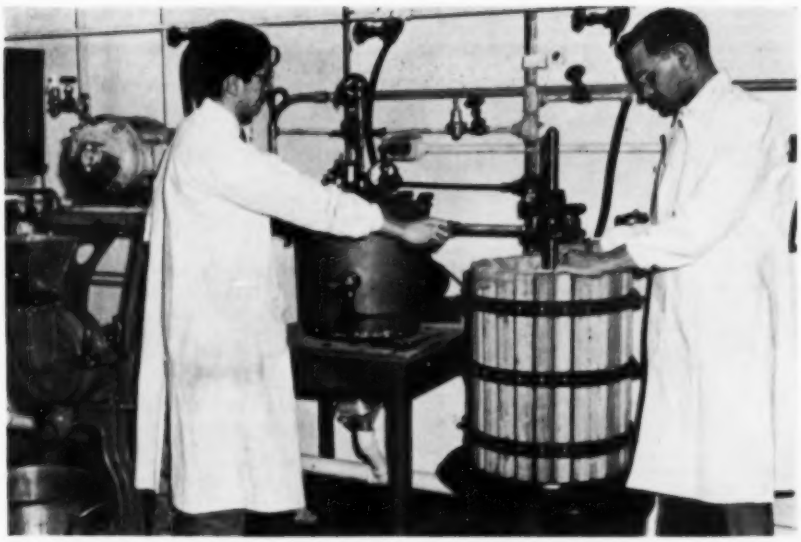
Canada Acts on Margarine

Canada may become a larger margarine market in the future. A Manitoba commission of inquiry has recommended removal of the ban on factory coloring of margarine. USDA says only British Columbia and Newfoundland permit factory coloring, while Quebec and Prince Edward completely prohibit margarine.

USDA Contracts for Research

USDA has made a contract with Lowell Technological Institute Research Foundation for research seeking new finishes for cotton wrinkle resistance and wash-wear properties.

■ **LYMAN D. GRISWOLD, Hansford, Calif., is a candidate for state senator from Kings County. He is a director of Calcot, Inc., and Ranchers Cotton Oil.**



TOKUJI WATANABE, on leave from the Japanese ministry of Agriculture, and A. M. Nash of the Northern Division, work with typical Japanese equipment in studying the preparation of tofu from U.S. soybeans in the USDA laboratory at Peoria, Ill. Equipment represents some of the steps in making tofu: (left to right) wet grinder, pressure cooker, and press. Soaking the soybeans precedes grinding. Collection of curd in wooden boxes follows the pressing.

May Mean Greater Exports

USDA Research With Japanese Foods Shows Promise for U.S. Soybeans

USDA RESEARCH, which shows that our soybeans can be used in Japanese whole-bean food processes, might open a larger part of the expanding Japanese market to U.S. beans. Research results include an improved process for making miso, a Japanese food.

U.S. soybeans now have limited acceptability in Japanese food processes that start with whole beans, although the Japanese in 1959 imported an estimated 35 million bushels of our beans—almost 10 times the quantity imported in 1950. Most U.S. soybeans that go to Japan are processed into oil and meal, which are used as food, A. K. Smith of the Agricultural Research Service reported after his 1957 investigations into the use of U.S. soybeans in Japanese foods.

About half of the soybeans used in Japan are eaten as traditional foods, most of which are made in processes that begin with whole beans. Miso, alone, accounts for 20 percent of the soybean consumption. Such foods are imported sources of protein and add flavor to a diet that contains little meat. A government plant to increase protein available in Japan over the next 10 years includes a 40 percent increase in soybean consumption.

Recognizing that the Japanese whole-bean processors use limited amounts of our soybeans, Dr. Smith recommended studies of U.S. beans in Japanese food processes. His survey in Japan and studies that followed were conducted under a market-development program in cooperation with the Foreign Agricultural Service and the American Soybean Association. Under the leadership of Dr. Smith, chemist, and C. W. Hesseltine, microbiologist, Japanese and American scientists conducted an investigation at the Northern Utilization Research and Development Division, Peoria, Ill.

The new miso process, in which the soybeans are cracked into grits and the seed coats removed, requires about half the fermentation time required by Japanese methods—which start with whole soybeans. The research was performed by Dr. Hesseltine and Kazuo Shibasaki, on leave from Tohoku University, Sendai, Japan.

Dr. Smith, A. M. Nash, Peoria chemist, and Tokuji Watanabe, on leave from the Japanese Ministry of Agriculture and Forestry, studied U.S. soybean varieties in tofu processing. They made high quality tofu from some U.S. varieties and found others that might be acceptable to Japanese processors.

Japanese processors say our beans absorb water, cook, and ferment more unevenly than their own. They also object to foreign matter, split and broken beans, and other crop material in our beans and to the color and "beany" flavor of products made from them.

The objections stem from differences in varieties and in handling soybeans in the two countries. U.S. soybeans, introduced from the Orient, have for 25 years been bred for yield, oil content, pest resistance, and similar characteristics but not for food processes that begin with whole beans—about half the total use in Japan. American farmers harvest beans mechanically in contrast to the one-hand scythe operations typical on Japan's average 2.5-acre farm. Machines crack more soybeans and are not as precise in foreign-matter removal as the Japanese methods.

Removing the seed coat eliminates all but one objection, foreign-matter content, to U.S. beans in miso processing. Miso produced in the Peoria laboratory was high quality.

USDA has published a booklet, ARS-71-12, "Use of United States Soybeans in Japan," prepared by the Northern Utilization Research and Development Division at Peoria, based on their studies, work and findings.

■ **DR. C. C. MURRAY, University of Georgia, has been reelected chairman of USDA's Cotton and Cottonseed Advisory Committee. J. D. FLEMING, National Cottonseed Products Association, was elected vice-chairman.**

• Continental Has New West Texas Office

A WEST TEXAS OFFICE at Lubbock is announced by A. L. Vandergriff, Birmingham, president of Continental Gin Co.

Richard A. Lackey, former Western District Sales Manager for Hardwicke-Etter Co., will head the new office in Lubbock.

"The ginners of West Texas have in the past given us a very generous share

RICHARD A. LACKEY

of their business," Vandergriff said. "We want to be in a better position to serve them in the future. Through our Lubbock repair depot we have brought them in-the-gin service. Now we want to add to this through better service and engineering and through field research in ginning to better meet the unusual conditions in this area.

"Through one of the most progressive programs of seed breeding, good cultivation and irrigation practices, practical harvesting methods, some of the world's best equipped gins, and an outstanding fiber research and merchandising program, the Plains of Texas have become one of the best cotton-producing areas in the world," he said.

"We are fortunate to have a man of Richard Lackey's ability to head this new office," the president added. "His long experience and many associations will help us give the best possible service in this area."

Lackey attended Austin College in Sherman, Texas. After service in the Merchant Marine, he joined Hardwicke-Etter as a territory salesman. At the time he joined Continental Gin he was Western District sales manager for Texas, Arizona, New Mexico and California.

Continental Gin's home office is in Birmingham. The main plant is in Prattville, Ala., with an assembly plant in Dallas. The firm operates repair depots in Atlanta; Harlingen, Texas; Tulare, Calif.; Phoenix and Lubbock, Texas.

"Continental maintains the largest sales organization in the industry, with nationwide sales contacts and a foreign sales division." Vandergriff said.

• NCPA Lists Plans For Convention

PLANS for the National Cottonseed Products Association convention, May 15-17, are well advanced, John F. Moloney, secretary-treasurer, reports. Roosevelt Hotel, New Orleans, will be headquarters.

First meeting will be that of the chemists' committee on Friday, May 13.

Rules committee members will meet May 14.

The policy advisory committee and several other committees will meet on May 15, and Wesson Oil and Snowdrift Co. will have a reception that evening for all convention registrants.

Association directors will meet at breakfast Monday morning, and convention sessions will be held Monday and Tuesday. Directors will meet again Tuesday at lunch.

Social events will include the ladies' luncheon at the Jung Hotel on Monday and a buffet luncheon for men at the Roosevelt and golf tournament at New Orleans Country Club on Monday afternoon. The Old Guard, honorary industry organization, will meet Monday evening at Antoine's. The Association's dinner dance on Tuesday evening will close the convention.

To Be Honored in Dallas

Bobby Kelly To Receive 4-H Cotton Award

Bobby Kelly of Martin County has been named the Texas 4-H Club boy to receive the 1960 Texas Cotton Ginners' Association $100 award for excellence in cotton production. (See article on Page 8, and also story about Craig Beckmeyer, last year's award winner, being honored by ACCO.)

Bobby is the son of Mr. and Mrs. Owen Kelly, Route 1, Stanton, and has completed nine years of 4-H demonstration work. He has been producing cotton since 1952. His demonstrations consisted of five acres each year until 1959 when his crop was increased to 18 acres. His production has ranged from 600 pounds of lint an acre in 1950 to two bales an acre in 1958. His 1959 yield was 21 bales from 18 acres. His cotton has been grown under irrigation.

Bobby will receive his award at the annual convention in Dallas, April 3-5.

Burrows at Arizona Mill

J. O. Burrows, formerly with firms in the Midsouth, is superintendent for Vegetable Oil Products Co. at Gilbert, Ariz.

Dr. Newton Is Coordinator

Dr. Roy Newton, retired Swift & Co. vice-president, has been appointed USDA coordinator for utilization research.

New Bulletin

FORT WORTH STEEL HAS GUIDE ON SCREW CONVEYORS

Fort Worth Steel & Machinery Co. has published a new "Engineering and Specific Guide" for screw conveyor installations to handle a wide variety of bulk materials, including foods, chemicals and cement.

Included are complete listings of Fort Worth Beeline screw conveyor components and accessories, with sizes and dimensions.

The 60-page illustrated booklet features detailed, step-by-step information on how to select and engineer the proper screw conveyor set-up to meet individual requirements. It lists approximately 300 different materials, classified by physical characteristics which affect conveyor selection.

Also given are formulas, tables of horsepower factors and conveyor speeds, and all other data needed for engineering and selection of equipment.

The publication describes how Beeline screw conveyor components are manufactured so that a "run" of conveyor assembles straight without costly matching, special adjustment or forcing.

Also included is information on how the Beeline can be used for special functions other than conveying—such as mixing, agitation and aeration of materials.

For copy of Catalog Section 200-C, write to Fort Worth Steel & Machinery Co., 3600 McCart Street, Fort Worth 10; or to The Cotton Gin and Oil Mill Press, P. O. Box 7985, Dallas 26.

CALENDAR

• March 23-24 — Louisiana-Mississippi Cotton Ginners' Association annual meeting. Hotel Vicksburg, Vicksburg, Miss. Gordon Marks, Jackson, Miss., secretary.

• April 3 — National Cotton Ginners' Association annual meeting. Dallas, Texas. Tom Murray, executive vice-president, P. O. Box 1098, Decatur, Ga.

• April 3-5 — Texas Cotton Ginners' Association annual convention. State Fair of Texas grounds in Dallas. For information, write Edward H. Bush, executive vice-president, P. O. Box 7665, Dallas 26.

• April 4-5—Mississippi Valley Oilseed Processors' Association annual convention. Buena Vista Hotel, Biloxi, Miss. C. E. Garner, 401 Exchange Building, Memphis, secretary.

• April 4-6 — American Oil Chemists' Society spring meeting. Baker Hotel, Dallas. Society headquarters 35 East Wacker Drive, Chicago.

• April 7-9 — American Cotton Manufacturers' Institute annual meeting. American Hotel, Bal Harbour, Fla. For information, write ACMI, 1501 Johnston Building, Charlotte, N.C.

• May 2-3—American Cotton Congress. Texas A&M College, College Station, Texas. For information, write Burris C. Jackson, general chairman, Hillsboro, Texas.

• May 4-5—Open House, American Cotton Manufacturers' Institute Fiber Testing Laboratory, The Clemson House, Clemson, S.C.

• May 5-6—Short Course for Oil Mill Operators. Memorial Student Center, Texas A&M College. Sponsored by College, Texas Cottonseed Crushers' Association and International Oil Mill Superintendents' Association. For information, write Dr. J. D. Lindsey, Texas A&M College.

• May 10-11—National Cotton Compress and Cotton Warehouse Association convention. Atlanta-Biltmore Hotel, Atlanta. John H. Todd, executive vice-president, P. O. Box 23, Memphis 1, Tenn.

• May 16-17 — National Cottonseed Products Association annual convention. Roosevelt Hotel, New Orleans. John F. Moloney, P. O. Box 5736, Memphis, secretary-treasurer.

• May 31-June 2—Eleventh annual Cotton Research Clinic, Grove Park Inn, Asheville, N.C. For information write George Wells, public relations representative, National Cotton Council, Ring Building, Room 502, 1200—18th St., N.W., Washington 6.

• June 5-7—Texas Cottonseed Crushers' Association annual convention. St. Anthony Hotel, San Antonio. Jack Whetstone, secretary-treasurer, 629 Wilson Building, Dallas.

• June 5-7—Tri-States Oil Mill Superintendents' Association annual convention. Hotel Buena Vista, Biloxi, Miss. N. L. Pugh, Southern Cotton Oil Division, Wesson Oil & Snowdrift Co., Inc., Newport, Ark., general chairman.

• June 12-15—National Plant Food Institute annual meeting. The Greenbrier, White Sulphur Springs, W. Va. Institute headquarters 1700 K Street, NW, Washington.

• June 16-18 — Southeastern Cottonseed Crushers' Association annual convention. Grand Hotel, Point Clear, Ala. C. M. Scales, P. O. Box 1145, Decatur, Ga., secretary-treasurer.

• June 21-22—Association of Southern Feed and Fertilizer Control Officials, Gatlinburg, Tenn., Riverside Hotel. For further information contact Maurice B. Rowe, secretary-treasurer, 1119 State Office Building, Richmond 19, Va.

• June 23-24—New Mexico Cotton Ginners' Association annual meeting. Navajo Lodge, Ruidoso. Winston Lovelace, Loving, secretary-treasurer.

• June 26-28 — North Carolina Cottonseed Crushers' and South Carolina Cotton Seed Crushers' Associations joint convention at Ocean Forest Hotel, Myrtle Beach, S.C. Mrs. M. U. Hogue, P. O. Box 6415, Raleigh, N.C., secy.-treas.

• June 26-28—The International Oil Mill Superintendents' Association convention, the Hotel Texas, Fort Worth. H. E. Wilson, secretary, P. O. Box 1180, Wharton, Texas.

• July 19-22 — 1960 Congress, International Association of Seed Crushers, Grosvenor House Hotel, Park Land, London, England; United Kingdom Crushers, hosts; A. E. Peel, 1 Watergate, London E. C. 4, secretary.

• August 22-23 — American Soybean Association and National Soybean Processors' Association joint annual meeting. Peabody Hotel, Memphis. George Strayer, Hudson, Iowa, American Association executive officer; Robert G. Houghtlin, Chicago, Ill., National Processors' Association executive officer.

• Sept. 27-28—Chemical Finishing Conference. Statler Hotel, Washington. For information, write National Cotton Council, 502 Ring Building, Washington.

• Sept. 27-29 — American Tung Oil Association annual meeting. Edgewater Gulf Hotel, Edgewater Park, Miss. Roland R. Becke, Poplarville, Miss., executive secretary.

• October 17-19 — American Oil Chemists' Society fall meeting. The New Yorker Hotel, New York City. Society headquarters 25 East Wacker Drive, Chicago.

1961

• Jan. 12-13—Beltwide Cotton Production-Mechanization Conference. Greenville, S.C. For information write Claude L. Welch, National Cotton Council, P. O. Box 9905, Memphis 12, Tenn.

• Jan 30-31 — National Cotton Council annual meeting. Peabody Hotel, Memphis. Wm. Rhea Blake, executive vice-president, P. O. Box 9905, Memphis.

• May 1-2 — Short Course for Oil Mill Operators. Memorial Student Center, Texas A&M College. Sponsored by College, Texas Cottonseed Crushers' Association and International Oil Mill Superintendents' Association. For information, write Dr. J. D. Lindsey, Texas A&M College.

Tulare Gins Are Hosts at Meetings of Farmers

Tulare County (California) cotton growers heard current production practices discussed at a series of meetings starting March 8. Meetings were held at J. G. Boswell Co. Gin., Tulare; Dinuba Grange Hall; Earlimart Memorial Hall; Kaweah Delta Gin; Coberly-West Gin, and Woodville. Extension Service representatives conducted the discussions.

laugh it off

Judge—"You are accused of hitting this Chinaman over the head with a vase. Have you anything to say for yourself?"
Prisoner—"Your honor, he threatened me in broken English, so I replied with broken China."

• • •

"Joe," one golfer remarked to another on the links, his voice full of marvel, "as long as we've been playing golf together I've never heard you swear."
"Yes, it's true I don't cuss," spoke up the other golfer thoughtfully, "but I'll have to admit when I slice I spit, and wherever I spit the grass doesn't grow any more."

• • •

Bob: My girl has an atomic brassiere.
Rob: What's an atomic brassiere?
Bob: One with a lot of fallout.

• • •

"Willie," said teacher, "can you name the principal river of Egypt?"
"It's the Nile, ma'am."
"That's right. Now can you tell me the names of the smaller tributaries?"
Willie hesitated, then smiled. "The juveniles!"

• • •

Jack: I just got a letter from Wisconsin today. It tells of a cousin of mine breaking a bottle of turpentine in his hip pocket.
Jim: What happened?
Jack: No one can say just yet. They haven't been able to catch him.

• • •

A baby sardine was swimming along happily with his mother when he saw his first submarine. Shaken with fright, he swam to his mother's side.
"Don't be frightened, dear," assured his mother, "It's just a can of people."

• • •

A lady patient about 40 went to see her doctor. "Doctor," she said, "I just don't know, but I don't feel good when I get up in the morning."
The doctor cast a weary eye on her, and countered, "Who the hell does?"

• • •

Lady in a sporting goods store: "How much are these improvers?"
Clerk: "Improv-hem! They're not the article you require, Madam, those are fencing masks."

• • •

"Whenever I have a headache, I take aspirin," the patient explained to the doctor. "When I have a cold, I go to bed and drink fruit juices. If I have stomach trouble, I take bicarbonate of soda. Have I been doing the right things?"
"You certainly have," replied the doctor. "That will be $10, please."

• • •

The famous psychologist had finished his lecture and was answering questions. One meek little member of the audience asked, "Did you say that a good poker player could hold down any sort of executive job?"
"That's right. Does it raise a question in your mind?"
"Yes," came the reply. "What would a good poker player want with a job?"

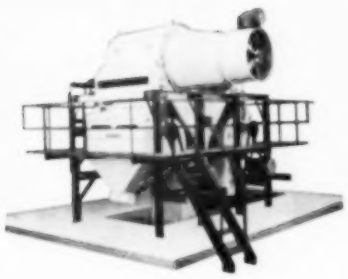
• • •

From Texas comes the tale of a rancher who had his pants blown off during a big windstorm. And to make it worse, he already had lost his shirt to the income tax boys.

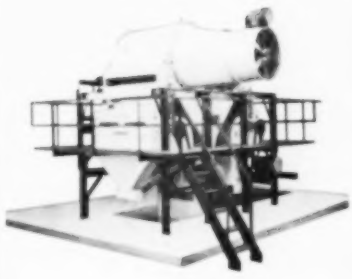
ALWAYS BETTER CLEANING

SINGLE | DOUBLE | TRIPLE

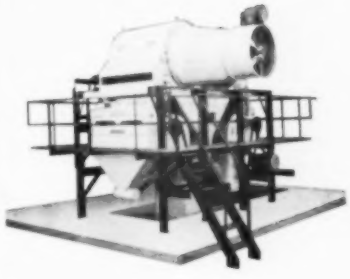
MOSS LINT CLEANERS



Research and engineering have made Moss Lint Cleaners the outstanding investment for progressive ginners. Models for all installations.



Consistent testing has proved that by adding a Moss to a Moss, higher grades and better color result from "Double" Lint Cleaning.



NOW, the trend is to a battery of three Moss Lint Cleaners. With proper precleaning and moisture control there is no fiber damage.

AND, *TRIPLE LINT CLEANING* IS SETTING HIGHEST RECORDS FOR THE GINNING INDUSTRY

"Triple" cleaning through a battery of three Moss Lint Cleaners will do more for sample improvement than a much greater investment in overhead equipment. Moss "Triple" lint cleaning is providing maximum bale values in approximately 178 installations throughout the cotton belt by giving higher grades, improved color and more uniform staple length. The third lint cleaner in a "Triple" installation actually performs as a finishing machine with amazing results. Lint loss is negligible in "Triple" cleaning. There is no fiber damage providing overhead and pre-cleaning machinery is used wisely and with a system of proper moisture control.

Ginners are universal in their endorsement of the dependable and effective performance of Moss Lint Cleaners. Whether yours is a single or double unit, installation of a second or third Moss will return your investment quickly. Take advantage now of MOSS benefits in your ginning operation.

Meet competition this sure, sensible way without waiting another season! Call us today for details!

MOSS-GORDIN LINT CLEANER CO.

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